

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.

— EXISTING LOW LEVEL MASS CONCRETE WALL  
— EXISTING HIGH LEVEL MASS CONCRETE WALL  
— RANDOM RUBBLE STONE WALL

**GENERAL SUMMARY:**  
 INSPECTION CONSISTED OF A VISUAL WALKOVER SURVEY ONLY.

**MASS CONCRETE WALL:**  
 THE VISUAL SURVEY OF THE EXISTING SECTION OF BOUNDARY WALL WAS CARRIED OUT FROM BOTH THE ROAD SIDE AND LOWER SIDE OF THE WALL. THIS SURVEY INDICATES THE WALL IS APPROXIMATELY 300mm THICK AND IS OF MASS CONCRETE CONSTRUCTION WITH ROUGH AGGREGATE & NO REINFORCEMENT. THE WALL WAS CONSTRUCTED WITH WHAT APPEARS TO BE POOR QUALITY CONCRETE (I.E. LIKELY TO BE SITE MIXED CONCRETE WITH NO REINFORCEMENT BETWEEN JOINTS)

THE WALL IS EXTENSIVELY WEATHERED/SPALLED THROUGHOUT WITH AGGREGATES EXPOSED. THE AGGREGATE IS POORLY GRADED AND EXCESSIVELY LARGE, CONSISTING OF BEACH GRAVEL/ROUNDED STONE & CRUSHED ROCK.

MISSING/INSUFFICIENT DRAINAGE ALONG THE MULLINGAR ROAD HAS RESULTED IN EXTENSIVE SPLASHING OF PONDED SURFACE WATER ON THE ROAD AND FOOTPATH ONTO BOUNDARY WALL BY PASSING CARS. THIS HAS CONTRIBUTED TO THE WEATHERED/SPALLED AREAS.

A NUMBER OF NON-STANDARD STORM DRAINAGE/WEEPHOLES THROUGH THE WALL HAVE RESULTED IN POOLING OF STORM WATER AT THE BOUNDARY WALL AT THE LOWER SIDE. THIS HAS RESULTED IN REGULAR SATURATION OF THE GROUND AND HAS LIKELY UNDERMINED THE WALL FOUNDATIONS TO SOME DEGREE. WEEPHOLES REQUIRE CONNECTION TO THE EXISTING FORMAL STORMWATER DRAINAGE SYSTEM TO PREVENT FURTHER UNDERMINING OF WALL DUE TO CONTINUOUS SATURATION AND WASHOUT OF FOUNDATIONS.

THERE IS EXTENSIVE VERTICAL AND HORIZONTAL CRACKING ALONG CONSTRUCTION JOINTS IN THE MASS CONCRETE WALL.

THERE ARE MULTIPLE INSTANCES OF WEATHERED/SPALLED/MISSING COPING.

THE MASS CONCRETE WALL IS OUT OF PLUMB/MISALIGNED AND LEANS TOWARD THE LOWER SIDE AT VERTICAL JOINTS, INDICATING DIFFERENTIAL LATERAL MOVEMENT, OWING TO A LACK OF DOWELS ACROSS VERTICAL JOINTS.

DUE TO REDUCED SECTION THICKNESS AND PRESENCE OF A VOID IN THE MASS CONCRETE WALL AT THE LOCATION IDENTIFIED AT 3AB, THE EFFECTIVE STRENGTH OF THE WALL HAS BEEN REDUCED. SHORT TERM REMEDIAL ACTION IS REQUIRED TO RESTORE WALL STRENGTH IN THIS AREA. THIS INVOLVES SUITABLE REMOVAL/REPLACEMENT OF THE WALL AND STRENGTHENING WITH REINFORCED CONCRETE. ALTERNATIVELY, PRELIMINARY PLANNING PROPOSALS INCLUDE FOR A REDUCTION OF THE WALL HEIGHT AND INCLUSION OF A NEW CONCRETE CAST IN SITU COPING WITH HAIRPIN FENCE ON TOP (SUBJECT TO DETAILED DESIGN FOLLOWING RECEIPT OF PROPOSALS FROM OTHERS).

**PROTECTED RANDOM RUBBLE STONE WALL:**  
 THE VISUAL INSPECTION OF THE PROTECTED RANDOM RUBBLE STONE WALL WAS CARRIED OUT FROM THE ROAD SIDE ONLY, AS EXCESSIVE VEGETATION FROM THE LOWER SIDE PREVENTS ACCESS.

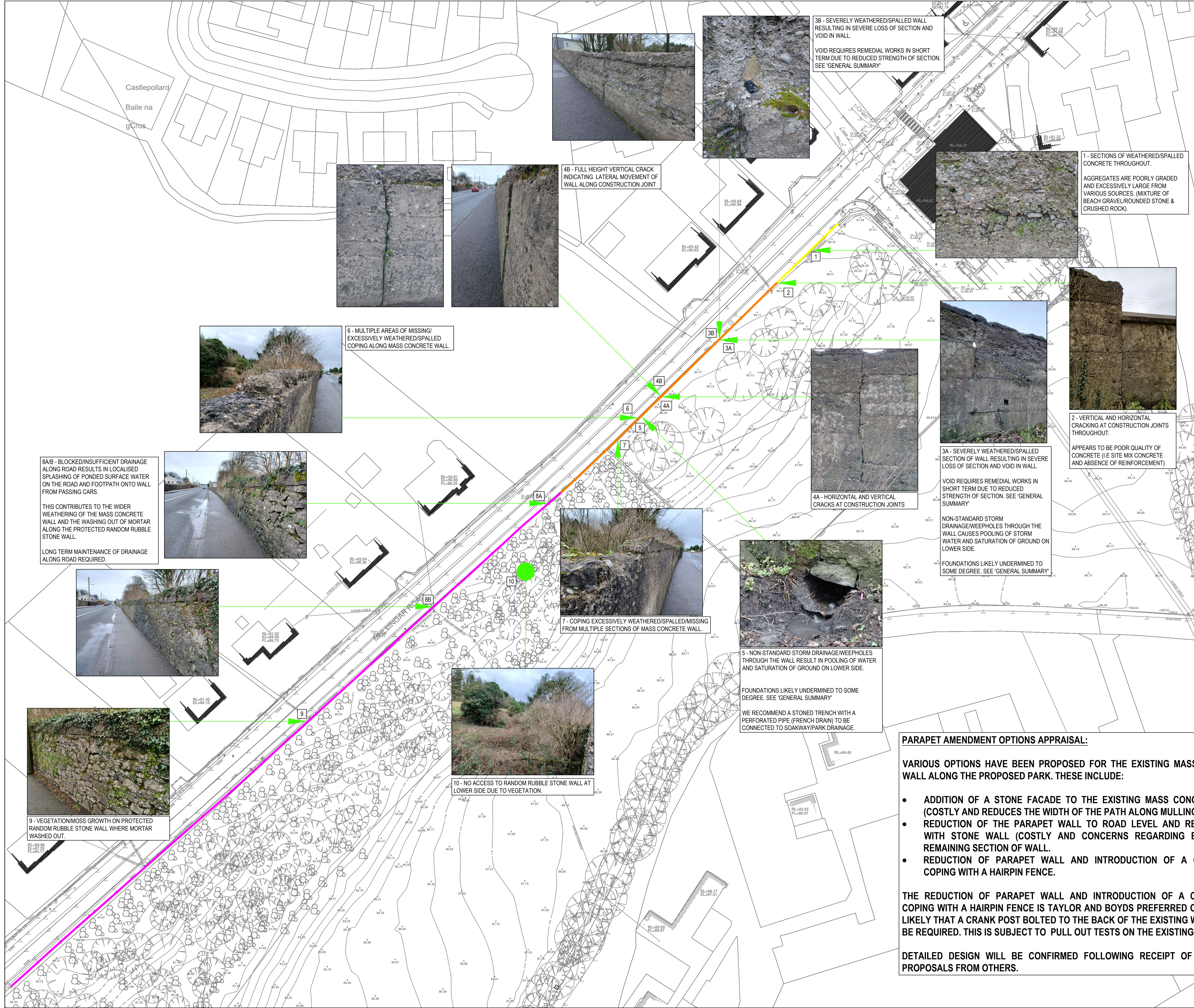
THE PROTECTED RANDOM RUBBLE STONE WALL HAS EXPERIENCED EXTENSIVE WASHING OUT OF OUT MORTAR THROUGHOUT, OWING IN PART TO THE AFOREMENTIONED POOR/INSUFFICIENT DRAINAGE ON THE MULLINGAR ROAD. VEGETATION/MOSS HAS GROWN IN PLACE OF THE MISSING MORTAR. ONGOING MAINTENANCE WOULD INVOLVE THE CLEARING OF VEGETATION/MOSS AND REPOINTING OF MORTAR JOINTS.

THIS VISUAL SURVEY DOES NOT CONSTITUTE A FULL STRUCTURAL SURVEY.

TAYLOR & BOYD DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE CONDITION OR CAPACITY OF THE EXISTING RETAINING WALLS. THE CONSTRUCTION OF THESE WALLS DOES NOT COMPLY WITH MODERN DESIGN STANDARDS FOR RETAINING WALLS SUPPORTING VEHICULAR TRAFFIC. THE CONSTRUCTION OF THE EXISTING PARAPET WALLS IS ALSO INADEQUATE TO ACT AS A VEHICLE RESTRAINT SYSTEM.

THE DESIGN AND CAPACITY OF THE RETAINING WALLS CANNOT BE ASCERTAINED WITHOUT INTRUSIVE SITE INVESTIGATIONS TO CONFIRM THE CONSTRUCTION OF THE VARIOUS TYPES OF RETAINING WALLS (INCLUDING OPENING-UP WORKS, TRAIL PITS TO DETERMINE FOUNDATION DETAILS, WALL THICKNESS, CONCRETE CORE TESTING, DRAINAGE DETAILS ETC). APART FROM THE TYPICAL DEFECTS LISTED ABOVE, THERE ARE CURRENTLY NO OBVIOUS SIGNS OF MAJOR DISTORTIONS OR BULGES.

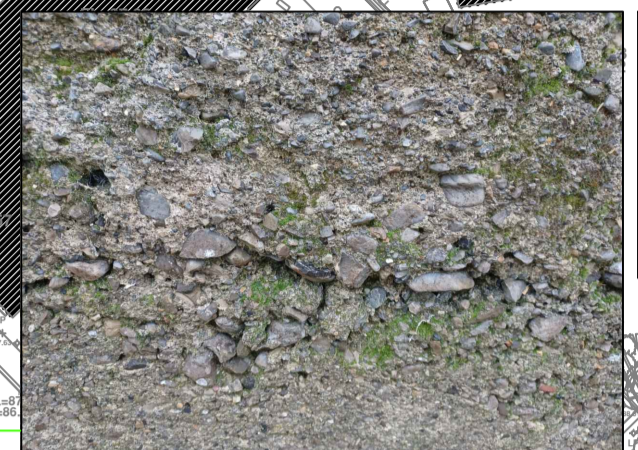
WE RECOMMEND THAT THE CONDITION OF THIS WALL IS MONITORED REGULARLY BY THE APPROPRIATE STATUTORY AUTHORITIES AND/OR OWNERS.



3B - SEVERELY WEATHERED/SPALLED WALL RESULTING IN SEVERE LOSS OF SECTION AND VOID IN WALL.  
 VOID REQUIRES REMEDIAL WORKS IN SHORT TERM DUE TO REDUCED STRENGTH OF SECTION. SEE 'GENERAL SUMMARY'



4B - FULL HEIGHT VERTICAL CRACK INDICATING LATERAL MOVEMENT OF WALL ALONG CONSTRUCTION JOINT



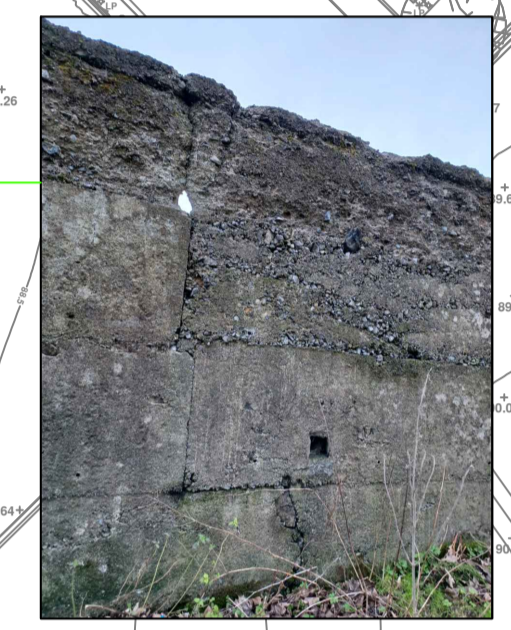
1 - SECTIONS OF WEATHERED/SPALLED CONCRETE THROUGHOUT.  
 AGGREGATES ARE POORLY GRADED AND EXCESSIVELY LARGE FROM VARIOUS SOURCES. (MIXTURE OF BEACH GRAVEL/ROUNDED STONE & CRUSHED ROCK).



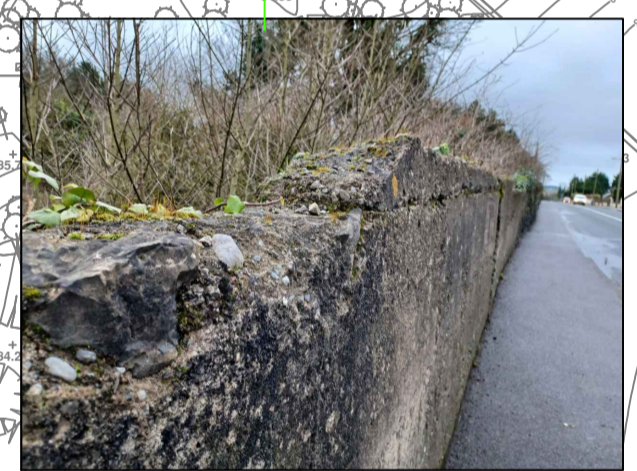
6 - MULTIPLE AREAS OF MISSING/ EXCESSIVELY WEATHERED/SPALLED COPING ALONG MASS CONCRETE WALL



2 - VERTICAL AND HORIZONTAL CRACKING AT CONSTRUCTION JOINTS THROUGHOUT.  
 APPEARS TO BE POOR QUALITY OF CONCRETE (I.E. SITE MIX CONCRETE AND ABSENCE OF REINFORCEMENT)



3A - SEVERELY WEATHERED/SPALLED SECTION OF WALL RESULTING IN SEVERE LOSS OF SECTION AND VOID IN WALL.  
 VOID REQUIRES REMEDIAL WORKS IN SHORT TERM DUE TO REDUCED STRENGTH OF SECTION. SEE 'GENERAL SUMMARY'



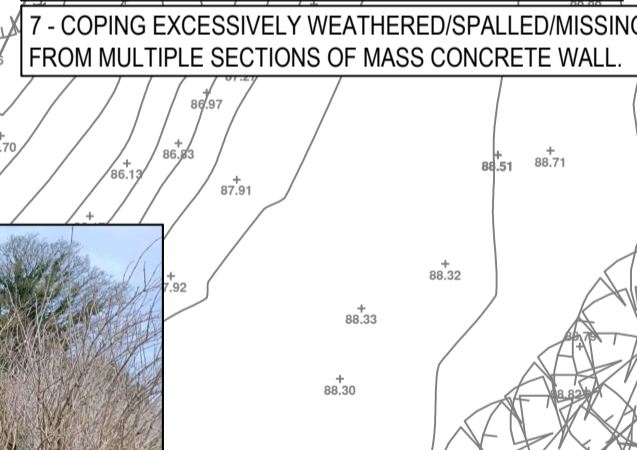
4A - HORIZONTAL AND VERTICAL CRACKS AT CONSTRUCTION JOINTS



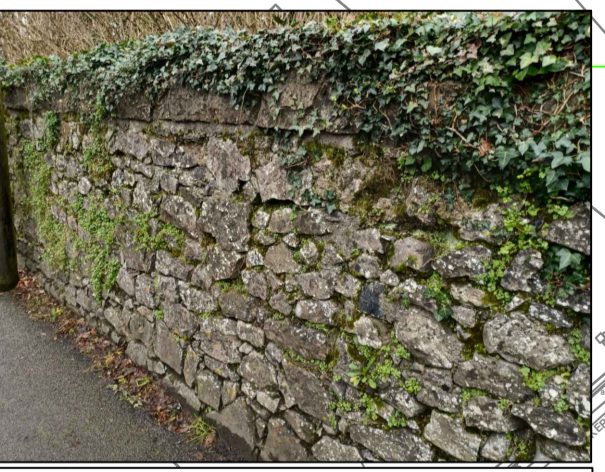
5 - NON-STANDARD STORM DRAINAGE/WEEPHOLES THROUGH THE WALL RESULT IN POOLING OF WATER AND SATURATION OF GROUND ON LOWER SIDE.  
 FOUNDATIONS LIKELY UNDERMINED TO SOME DEGREE. SEE 'GENERAL SUMMARY'



8A/B - BLOCKED/INSUFFICIENT DRAINAGE ALONG ROAD RESULTS IN LOCALISED SPLASHING OF PONDED SURFACE WATER ON THE ROAD AND FOOTPATH ONTO WALL FROM PASSING CARS.  
 THIS CONTRIBUTES TO THE WIDER WEATHERING OF THE MASS CONCRETE WALL AND THE WASHING OUT OF MORTAR ALONG THE PROTECTED RANDOM RUBBLE STONE WALL.  
 LONG TERM MAINTENANCE OF DRAINAGE ALONG ROAD REQUIRED.



7 - COPING EXCESSIVELY WEATHERED/SPALLED/MISSING FROM MULTIPLE SECTIONS OF MASS CONCRETE WALL



9 - VEGETATION/MOSS GROWTH ON PROTECTED RANDOM RUBBLE STONE WALL WHERE MORTAR WASHED OUT.



10 - NO ACCESS TO RANDOM RUBBLE STONE WALL AT LOWER SIDE DUE TO VEGETATION.

**PARAPET AMENDMENT OPTIONS APPRAISAL:**

VARIOUS OPTIONS HAVE BEEN PROPOSED FOR THE EXISTING MASS CONCRETE WALL ALONG THE PROPOSED PARK. THESE INCLUDE:

- ADDITION OF A STONE FACADE TO THE EXISTING MASS CONCRETE WALL (COSTLY AND REDUCES THE WIDTH OF THE PATH ALONG MULLINGAR ROAD)
- REDUCTION OF THE PARAPET WALL TO ROAD LEVEL AND REPLACEMENT WITH STONE WALL (COSTLY AND CONCERNS REGARDING BONDING TO REMAINING SECTION OF WALL)
- REDUCTION OF PARAPET WALL AND INTRODUCTION OF A CAST-IN-SITU COPING WITH A HAIRPIN FENCE.

THE REDUCTION OF PARAPET WALL AND INTRODUCTION OF A CAST IN-SITU COPING WITH A HAIRPIN FENCE IS TAYLOR AND BOYD'S PREFERRED OPTION. IT IS LIKELY THAT A CRANK POST BOLTED TO THE BACK OF THE EXISTING WALL WOULD BE REQUIRED. THIS IS SUBJECT TO PULL OUT TESTS ON THE EXISTING WALL.

DETAILED DESIGN WILL BE CONFIRMED FOLLOWING RECEIPT OF CONFIRMED PROPOSALS FROM OTHERS.

P1	FOR INFORMATION	11.02.22	KMcC	EON
Rev	Amendment	Date	By	Chk

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Status: **FOR INFORMATION ONLY**

Project: **CASTLEPOLLARD REGENERATION**

Dwg Name: **VISUAL STRUCTURAL SURVEY OF WALL ALONG MULLINGAR RD**

Client/Architect: **WEST MEATH COUNTY COUNCIL**

Scale: (@ A1)	Date:	Drawn:	Checked:
SCALE	11.02.22	KMcC	EON
Drawing No:	20058-SK03	Rev:	P1