

## GROUND BEHAVIOUR LEGEND Unit Processes Impact Plateau Gently sloping and undulating areas forming the Property in these areas has been largely higher ground upslope of the Severn and unaffected by ground movement. Subsidence and shrink/swell behaviour of the underlying Coalbrookdale valleys. The plateau is largely unaffected by ground movement although localised clays and made ground deposits has subsidence of the underlying clays and made ground resulted in slight and occassional moderate deposits may occur. The ground is susceptible to damage to buildings. saturation during seasonal variations in rainfall and high groundwaters. Much of the plateau has been used to dump spoil during industrial processes of brick and tile works and mining. Plateau Margin Gently sloping and undulating areas forming the Property in these areas has been affected by imperceptible progressive settlement of ground adjacent to the Plateau top. This area is subject to imperceptible progressive settlement of the the underlying clays and made ground. Property and structures have been widely ground due to the effects of historic and ongoing affected causing moderate and occasional unloading of the valley slope through historical landslide prodesses. Tension cracks and scarps serious damage br cracking, rotation and settlement of buildings. formed in localised places may indicate potential for landslide events involving the slope below. Parts of the Plateau Margin have been used to dump soil during industrial processes of brick and tile works and mining Landslide Complexes - Ironbridge Valley Landslide Systems Rotational Systems Blocks: Property situated in these areas has been Area subject to imperceptible settlement of relatively affected by slight to occasional damage. deep-seated landslide blocks upon pre-existing shear | Walls and roads appear to have been more surface. The exact mode of failure is uncertain but vunerable and widely affected by ground most likely involves backward rotation and/or forward heave. Differential shear, settlement and crack damage to walls has been recorded. translation of landslide blocks. The benches are mostly subject to creep, but localised block disruption can give rise to differential shear, tension, Property situated on scarp slopes has been settlement and heave. affected by ground movement, differential Scarps; settlement and heave. Where scarp slopes Scarp slopes at the rear of shallower sloping blocks are degraded subject to superficial ground movement. Another have been developed with inadequate Instability is typically characterised by development of retaining structures, serious damage due to around movement has been recorded. Failure tension at the crest of the slopes, differential of retaining structures may lead to sudden settlement/rotation on the slope and compression or ground movement causing run out of debris heave at the toe of the slopes. In localised areas onto property downslope and undermining of the scarp slopes are susceptible to small-scale property upslope. failure, particularly where there is poor drainage. Property situated in these areas has been Accumulation Zone These areas comprise gently sloping to level ground affected by slight to occasional significant associated with the accumulation of debris resulting damage. Walls and roads appear to have from the landslide system upslope. Instability is been more vunerable and widely affected by typically by differential settlement and creep, but ground heave. Differential shear, settlement expansion of the more active landslide systems and crack damage to walls has been above or below may result in localised block recorded. disruption which can give rise to differential shear, tension, settlement and heave. River Cliffs Steep scarp slopes formed along the the River Most property has been unaffected or only Severn. The slopes appear to have been affected by slightly affected by ground movement due to imperceptible slow creep and localised shallow creep. River Cliff Failures Areas of slope fronting the River Severn which are Property situated in these areas has been subject to imperceptible heave at the toe of a cliff affected by slight to significant damage. failure. There are signs of relatively recent landslide activity. Differential shear at the edges of the landslide are apparent. Active and Elongated (towards the east of the study This is an undeveloped area of the valley Mudslides boundary): this area is affected by seasonal landslide side. novement and can vary from year to year. Although Reported landslide movement in the 1930's movement is imperceptible, large scale events have damaged buildings beyond repair and led to been recorded and may occur. Instability is typically demolition. Mudslides present a threat to characterised by differential shear, tension, opening public safety due to the very soft ground of cracks, settlement and heave. conditions. Landscaped (near Lincoln Hill): Area characterised by Area of landscaped slope which has been shallow mudslides in a series of head and track terraced for development. Property situated blocks. The clay slopes are subject to ongoing creep in this area is largely built upon the blocks and periodic ground movement events likely to be and ihas been little affected by ground movement with localised significant damage. triggered following prolonged or heavy rainfall. Mudslide terrain is characterised by poor drained, unstable ground conditions. Property in this area is situated on the Lloyds Coppice System Area affected by shallow mudslides and localised rotational failures. There are signs of active landslide | flanks of the landslide system and are processes in this area, with fresh tension scarps, toe subject to slight to moderate damage. Roads appear to have been more vunerable heave and differential settlement. and are affected by significant damage in places. Valley Side Slopes Stream Valley Level soft ground areas subject to occasional No properties observed to be situated within flooding and progressive subsidence and silting these areas. ssociated with saturated ground conditions. Some valley floors may have been former watercourses which have been abandoned or rerouted. Small Stream Valley Valley side slopes formed in clay subject to Property within these areas shows slight settlement and heave. damage due to ground movement Steep Valley Sides Degraded slopes showing historic shallow seated Property within these areas shows moderate failures in the form of rotational failures and to occasional significant damage due to mudslides of minor instability. Most of these slopes ground movement. are densely vegetated with mature tree growth. Shallow Valley Sides Degraded slopes largely landscaped for agricultural Property within these areas shows moderate and development. The slopes are subject to creep to occasional significant damage due to ground movement. Roads and walls above and settlement. steeply sloping ground show slight to Stream-side Steep significant damage due to creep and settlement at the toe of the slope. Slopes The slopes have been over-steepened by fluvial Property within this area has been built processes resulting in superficial ground movement. upon benches within the slope, no apparent The slopes are subject to heave, settlement and damage has been recorded. shallow seated landslides. Worked Steep sided The area of Lincoln Hill comprises worked quarries Properties and infrastructure have been and underground workings. The workings have been affected by crown holes in the past. No slopes filled in as far as possible in the late 1980's. Prior crown hole development has been recorded to this, crown holes were evident within Lincoln Hill since the infilling and the surrounding areas above the areas worked. It is not clear whether monitoring (to date) is being carried out on the area and the risk of further settlement and crown hole development is not known. Areas of ground above underground workings not filled in are likely to be subject to subsidence, creep and crown holing; areas quarried may be subject to isolated superficial failures of degraded slopes. Coalbrookdale Landslide Complexes Mudslide Systems This area is affected by seasonal landslide movement | Few properties lie within the zone of ground and can vary from year to year. Although movement instability in this area and of the properties is imperceptible, large-scale events have been inspected are subject to slight to moderate recorded and may occur. Instability is typically damage. Mudslides present a threat to characterised by differenetial shear, tension, opening public safety due to the very soft ground of cracks, settlement and heave. conditions. Area affected by ongoing settlement of deep seated The developed ground shows mainly Rotational Systems landslide blocks, likely to be situated on pre-existing moderate and significant damage to shear surfaces. The toe of the landslide system has property. This area is likely to be subject to been developed using the benches of the blocks as creep, settlement and toe heave. terraces. The blocks are subject to settlement and creep, and the landslide processes include differential shear, tension, heave and superficial failures. River Valley Floor Features This area is affected by seasonal variations in rainfall | Based on EA's indicative floodplain plan Floodplain within the Upper Severn catchment area and can vary from year. High porewater pressures can build up during a flood that may trigger piping and localised failures of the slope following rapid drawdown. This area is affected by settlement, creep and shallow superficial failures. River Terrace Landscaping has obscured much of the natural Property situated within these areas may be landforms. It is probable that this area comprises affected by subsidence and slight damage alluvial deposits from early deposition of the River has been recorded. Severn. This area is affected by imperceptible settlement and creep. Fan and Floor Much of Coalbrookdale valley floor has been Property situated in these areas show slight developed for infrastructure and industry. The valley to moderate damage and occasional floor is likely to comprise fluvial deposits which may significant damage where a property is be prone to imperceptible settlement and creep. located adjacent to the stream. Carl Longland Borough of Head of Mobility and Development **TELFORD** Civic Offices, PO Box 212,

æ	W	R	Е	K	1	N	TELFORD TF3 4LB DX:712122 Telford 5	
ON	BR	RII	)G	E	A	N	ORGE INSTABILITY D COALBROOKDALE HAVIOUR STUDY	
			G	RO	U]	ND	BEHAVIOUR	

Figure Drawing B

1:3000 @ A0

High-Point Rendel