

# ARUN DISTRICT COUNCIL

## REPORT TO AND DECISION OF CABINET ON 16 NOVEMBER 2020

**SUBJECT:** Beach Access – Bognor Regis

**REPORT AUTHOR:** Roger Spencer – Engineering Services Manager  
**DATE:** October 2020  
**EXTN:** 37812  
**PORTFOLIO AREA:** Technical Services

### EXECUTIVE SUMMARY:

The report considers the options available to achieve access to the beach for those with limited mobility.

### RECOMMENDATIONS:

That Cabinet:

- 1) Notes the Report;
- 2) Agrees not to pursue Options 1, 2, 3, 6 or 8; and
- 3) Endorses further investigation and potential viability of Options 4, 5 and 7 as a means of improving access to the lower beach at Bognor Regis, with findings and further recommendations to be reported back to the relevant Committee.

### 1. BACKGROUND:

#### 1.1. The Issues

- 1.1.1. There has been a long-held belief, by many local residents of Bognor Regis, that the shingle that has been on the beaches of the central area since the 1980s is detrimental to the enjoyment of the beach and that the 'sandy beaches' should be returned.
- 1.1.2. Latterly, there have been calls for better access, not just for able bodied but also for the disabled, to the lower foreshore.
- 1.1.3. It should be noted that the predominance of shingle along the majority of the Sussex coast is a natural phenomenon and that the sandy beaches of the earlier years of the 20<sup>th</sup> Century were in the most part due to a combination of the construction of the original seawall and the lack of groyne maintenance during the wartime period.

- 1.1.4. Shingle is now widely held as the best mechanism to absorb incident wave energy and to avoid, as far as practicable, flood and erosion damage. The sand is present as a thin veneer (~300mm thick) over the underlying strata; little has changed in this respect, although the thickness of the sand layer does fluctuate naturally.
- 1.1.5. Many investigations, and a number of trials, have been undertaken in recent decades, with the object of providing a better 'connection' to the sea. This has usually resulted in the construction of sections of decking, just off the promenade, onto the shingle. Whilst this enables less able-bodied persons to get closer to the water, it does not achieve the ultimate goals of either returning the sands or providing full access.
- 1.1.6. Recently, a scheme was put forward to lay temporary, seasonal aluminium decking sections from the promenade, over the shingle crest and down the front slope of the beach onto the sand. This was modified to laying the metal sections only on the flat crest area, as the sloping sections would not be Equalities compliant (see 2.2.4). A number of procedural obstacles became apparent and the scheme was put to one side, in favour of looking at the wider provision options. This report starts that process.

## **1.2. Constraints**

- 1.2.1. The area has a tidal range of ~6.5m and is open to the force of prevailing south-westerly wind and waves.
- 1.2.2. Under natural conditions, the beach is a shingle:sand mix (shingle upper / sand lower). The natural angle of repose of shingle in this area (beach face slope) is around 1 in 9. The shingle is extremely mobile - both underfoot and under the influence of waves, tides and currents. The beach profile will vary and shingle re-distribute on each tide.
- 1.2.3. The shingle is naturally occurring and drifts under wave action from west to east – this is unpredictable in terms of precise quantities (estimated annual net volume 3,000 - 10,000m<sup>3</sup> pa) and sometimes the drift is reversed when wave conditions dictate.
- 1.2.4. Any provision would need to be Equalities compliant (max gradient vs slope lengths, handrails, edge/surface treatment etc.). Although not directly applicable, Part M of the Building Regulations relates to access and use of buildings. Guidance is available through good practice guides published by Central Government and this is seen as the best applicable in this situation.
- 1.2.5. There are various combinations of slope and distance which wheelchair users are considered able to negotiate; short distances may have steeper slopes (1 in 12) but the maximum slope length is 10m and the maximum rise in that distance can be only 500mm (1 in 20); flat landings are required between subsequent rises; edge protection and handrail provision are also important considerations.

- 1.2.6. High and low tides do not occur at the same time every day and there are variations in the height of the tide (Springs and Neaps) There will be periods throughout the year when the beach is not accessible for good parts of daylight hours – this is obviously true for abled bodied as well as the disabled.
- 1.2.7. The actual and effective length of any facility would be critical – there would be a requirement for approximately 108m of combined slope and landing (assuming a slope of 1 in 20. If the facility were too long (projecting out to sea) then this would result in very limited time on the available beach– too short and the sand would not be reached.
- 1.2.8. Need for design to cope with fluctuating beach levels over its length and especially at ‘lower exit point’.
- 1.2.9. Not only is the initial cost a major factor but all options have a revenue implication; there would be a need to consider what that requirement would be to provide maintenance/management for a particular option, as this could have considerable revenue and resource implications going forward.

### **1.3. Land Ownership**

- 1.3.1. In the central area of Bognor Regis (Gloucester Road to Nyewood Lane) the promenade and beach above the High Water Mark is in the ownership of Arun District Council. The Foreshore (between high and low water Mark) is owned by the Crown and leased to Arun DC (under a Regulating Lease) – permission for any works on the Foreshore would need to be sought from the Crown; any such permission would include a requirement to maintain and keep safe and potential removal (see 1.8.5).

### **1.4. Current provision**

- 1.4.1. There are a number of ramps across the District; Appendix 1 shows the location of the Bognor Regis ramps. A launching ramp exists at Littlehampton (used by the RNLI lifeguards); there are also private boat facilities at Rustington (Princess Marina Ho.) and at Elmer; none of these is Equalities compliant – most are unsuitable for assisted wheelchair use. A public ramp was proposed in the 1990s at Littlehampton (East Green) – this would have been to the necessary specification for disabled access, but the scheme was dropped due to lack of support locally.
- 1.4.2. There are plant access ramps on the Felpham frontage; some of these are used by fishermen and the yacht/dinghy club(s) who have access to powered assistance to recover boats (winch / tractor). There is a plant access ramp at Gloucester Road, which was provided as part of the coastal defence scheme in the 1970s – despite later works to improve its surface and extend its length, it is not Equalities compliant and requires (powered) management to launch and recover jet-skis and the like.
- 1.4.3. There is private provision at Park Terrace, where the BR Sailing Club has constructed a timber launching ramp – again, this is not Equalities compliant and the Club uses a winch to assist craft recovery. The boat pound at the west end of Marine Drive has rubber matting to enable the launch and recovery of predominantly fishing boats, with the aid of a winch.

## **1.5. Adverse Scenarios**

- 1.5.1. In providing access to the Foreshore, careful consideration needs to be given to the following, if the Council is to avoid considerable reputational risk / damage. In providing a public facility, it should be safe for all users.
- 1.5.2. Having got onto the foreshore, a disabled person would need to stay within the immediate groyne bay, otherwise there would be the risk of being cut off by the tide, with no escape. The lower foreshore is a wide, open space and on most tides, it would be easy to 'stray' laterally at low water, not being able to get to whatever facility was provided when the tide turned.
- 1.5.3. Ordinary wheelchairs would be very likely to become stuck and even walking frames could become unstable or damaged as the sand along the foreshore can be soft. If the sand were to be temporarily lost (as can happen after storm conditions), the underlying London Clay can also be very soft.
- 1.5.4. If provision was made for users to have access to the foreshore in their own (wide wheeled) wheelchairs then they would need to understand the probable effects that salt and sand would have on their chairs – powered chairs would be especially susceptible to damage.
- 1.5.5. If access were made too easy, then unwelcome uses might develop (e.g. motorcycles on the foreshore). This would be contrary to the Crown lease and local bylaws, increasing the need for control or management of the access (e.g. gated).
- 1.5.6. Whilst not necessarily an 'adverse scenario' but depending upon the preferred option, it could become a focal point for all users, thus marginalising the 'target audience' and concentrating usage of the beach to one area.
- 1.6.** In providing a permanent feature, there is a need to consider: a) if it would be feasible to use (i.e. easily negotiable by all users); b) likely to be used by sufficient numbers so as not to become a 'white elephant'; c) maintainable into the future (i.e. with secured funding); possible to decommission if not supported or severely damaged.

## 1.7. Options

The following table provides a range of possibilities and commentary

	Type / description	Cost (indication)	Constraints / opportunities	Comment
1	Remove shingle from one or two groyne bays (seasonal), including some form of access from Promenade down to beach level – existing ramps not Equalities compliant.	Initially low but shingle replacement cost <u>very high</u>  Storage of shingle?	Likely to be partially filled by natural littoral drift during the summer. Little guarantee that the bays would refill naturally to required levels at the end of the summer (ready for winter storm conditions).	<b>Not practicable.</b> No defence to potential for summer storms.  Would introduce ‘lag’ to littoral drift regime in adjacent bays, whereby natural shingle distribution and littoral drift are disrupted, thus increasing the risk of flooding and/or erosion elsewhere
2	Matting	Low capital but Medium/High maintenance / resource requirement  Matting - usually taking the form of rubber conveyor belting or purpose made rollout pathway) would either be rolled out and back up on each tide / day (very labour intensive - potentially requiring specialist machinery) or left rolled out. If left out, the matting would be susceptible to being thrown around in the surf or	<b>Not Equalities Compliant</b>  Would potentially provide some help to ambulant persons but not suitable for wheelchair use as the matting would follow the undulations of the shingle, unless this was regularly (daily?) re-graded.  No handrail provision	Seasonal only  More suited to boat trailers unless on level sand

		covered with shingle.			
3	Sectional decking following the slope of the beach	Medium. Usually taking the form of metal or timber interlinked panels	<b>Not Equalities Compliant</b> as the gradient would be too steep  Risk of damage due to wave action	Timber/metal decking units only suitable to extend from promenade to beach crest	
4	Provision of special 'buggies' – potentially in combination with matting	Medium but cost of providing service should be factored in - potentially as a concession?	Would need almost constant (daily) management of shingle to provide suitable gradient. Seasonal 'offer' only	More suited to shallow sloping sandy beaches (e.g. Studland Bay)	
5	Powered 'shuttle' service  e.g. tracked machine with low loading bed	Medium to high initial cost (need for development) and cost of operation and making the beach slope suitable on a daily basis	Pre-existing machinery? If not, then would need extensive development and certification to carry persons	Probably only viable as a seasonal offer	
6	Concrete ramp structure	High capital  Ongoing maintenance of structure in longer term (deterioration of concrete in marine/shingle environment:  + cost clearing of surface from surface (daily)	Would interfere with natural littoral drift, especially if provided in Rock Gardens area, and would exacerbate coastal defence issues	Need for careful siting so as not to unduly affect littoral processes	
7	Timber piled ramp	High capital  Ongoing maintenance cost of structure (to combat timber abrasion)	Should allow natural littoral drift to continue.	Would need careful design to achieve goals whilst being Equalities Compliant	

		and clearing of surface	Potential life – 25 years	See Appendix 2
8	A combination of 6 & 7 based upon an existing ramp	High Maintenance as Options 6 & 7	Would need extensive works to make Equalities compliant	

### **1.8. Investigations to date:**

1.8.1. Contact has been made with members of the Local Government Association Coastal Special Interest Group; only two Councils have responded to date.

1.8.1.1. Torridge DC (similar but rocky beach tidal range ~8m) has recently refurbished a concrete ramp which facilitates slightly easier access to the foreshores but is considered a slipway rather than a disabled access.

1.8.1.2. Chichester DC (beach and tidal range similar to Bognor Regis) the beach in one location is graded and regularly covered with beach sand; this helps with access but the same location is used for the safety boat and a tractor is available as and when required. Only available seasonally.

1.8.1.3. A local coastal engineering company was also contacted, they had provided a facility for Eastbourne BC (similar shingle beach but smaller tidal range) – this is an access (timber boarding) but it is only from the edge of the promenade to the beach crest and does not go down to the water's edge.

1.8.1.4. Proactive contact was made with Brighton and Hove Council (B&HC), (beach and tidal range similar to Arun but less drying sand). The B&HC website indicates that a specialist chair service is available. Chairs are provided free but on condition that they are only used on the flat top area of shingle; this is contrary to the recent Channel 4 programme that showed the presenters getting close to the water; it was evident from the Ch 4 footage that getting down the steep shingle slope was challenging let alone getting back up (which was not shown!). See 9. Background Papers for a link to the programme.

### **1.9. Short-listing of Options:**

1.9.1. Option 1 should be discounted on coastal process grounds.

1.9.2. Option 2 & 3 should be discounted due to non-compliance with Equalities requirements

1.9.3. Options 6, 7 & 8 may need to be discounted on grounds of coastal processes and/or cost in the current economic situation – however, Option 7 is the preferable of the three

1.9.4. Options 4 & 5 remain worthy of further investigation and costing (e.g. buying/leasing/operating) to establish viability

### **1.10. Other Considerations**

1.10.1. Most of the area has Site of Special Scientific Interest (SSSI) status and is within a new Marine Special Protection Area (mSPA).

1.10.2. Approvals would therefore be required in terms of:

1.10.2.1. Planning Permission: The structure would be at least 9m wide and around 60m long and sited in the central part of the tourist beach and Bognor Regis (there are pros and cons to this)

1.10.2.2. Marine Licence (Marine Management Organisation)

1.10.2.3. Coast Protection Act (Navigation) and

1.10.2.4. The Crown Estate (landowner).

1.10.3. The edge of the shingle is at approximately mean sea level. This means that whichever option is preferred, there would be only half of the tidal cycle available (around 6 hours) to access the foreshore, irrespective of it being springs or neaps. However, high spring tide is usually at around mid-day & mid-night and neaps around 0600 & 1800. Spring tides would provide more sandy area but more opportunity for users to travel laterally and risk being cut-off by an incoming tide. Neaps tides would constrain users to the within the immediate groyne bays, making it slightly safer but provided less 'ability to roam'.

1.10.4. Need/desire for dedicated nearby parking and easy access to the Promenade.

1.10.5. Safe storage of wheelchairs if a 'provided' facility is the preferred option.

1.10.6. Due consideration should be given to decommissioning of any provision made. This would be required at the end of service life, if the facility was not used by the target audience, became too expensive to operate, was damaged beyond economic repair or had severe, unforeseen effects on coastal processes.

### **1.11. Opportunities**

1.11.1. The facility could be seen as exemplar for disabled provision.

1.11.2. Possibility to provide 'added value' at beach head e.g. café, changing facilities, etc. However, this would need to be meshed with existing regeneration plans for the relevant part of the seafront.

**1.12. Achieving the desired remit – Full disabled Access (Equalities compliant)**

1.12.1. As noted in 1.8 short-listing, only a fixed structure would provide un-aided access for all and then the length of slope (even broken by landings, as required) would be on the limit of reasonableness, given in guidance.

1.12.2. Other options either require assistance or are not suitable for wheelchairs

**1.12.3. Risks**

1.12.4. There are considerable risks to consider, whichever option is preferred:

1.12.5. Health & Safety - The facility would require regular maintenance – not only structurally but day to day to ensure that the surface remained safe and usable – not only would there be shingle to sweep from time to time but also timber decking and handrailing would be regularly immersed in the sea and thus soon be covered with algae, becoming slippery – non-slip surfaces could be applied but these would still require maintenance (e.g. regular power washing).

1.12.6. An initial approach has been made to RoSPA to ensure that proposals were compliant and not likely to induce currently unforeseen hazards. Further work would be required as part of the detailed design (of any option).

1.12.7. Cost / deliverability / timescale. There are clearly supply-chain issues in the current pandemic situation; sufficient time should be built into any programme. The various options have differing delivery periods and whilst a timber piled option might take 4-5 months to construct there would be considerably longer procurement and lead-in times.

1.12.8. Maintenance / storm damage – the outline design of the timber pile option has called upon groyne construction techniques to help build in robustness. However, groynes do not have decking or handrails and storm damage is likely to occur to these components. To ensure that the facility is maintained, a ‘ring-fenced’ maintenance budget of at least £10,000 p.a. is suggested. To put this in context, the revenue budget for the Council’s 280 groynes and 8km of seawalls is a little over £20,000 (plus 30% of the TMT maintenance gang’s availability).

1.12.9. Useability / mis-use – as noted elsewhere, it would be advisable to construct a full scale prototype and consider how any facility was managed on a daily basis

1.12.10. Resource provision going forward to manage the facility

1.12.11. Coastal Processes – introducing any new structure into a coastal system can have wide ranging effects, not only locally but for some considerable distance along the coast. Most structures are introduced with the aim of providing a beneficial effect on coastal processes but unexpected outcome sometimes become apparent. Any option provided for improving access would probably not have a beneficial effect on coastal processes; these effects can be assessed, and detrimental effects designed out but it should be kept in mind that unforeseen effects could occur.

### **1.13. Costings**

- 1.13.1. An initial design and costs estimate has been prepared, based on a timber piled option.
- 1.13.2. This would need to be in the order of 100m long overall (to achieve Equalities compliance) but project from the promenade by around only 60m.
- 1.13.3. A straight ramp would extend to around the end of the existing groynes (leaving only a short window of opportunity for access and egress) thus increasing the risk of being cut off by incoming tides. It would not be possible to access the structure from the side.
- 1.13.4. A loose 'zig-zag' design, extending out by around 60m would therefore be necessary. Any shorter than 60m (tight 'zig-zag') would not reach the sand. See sketches at Appendix 1
- 1.13.5. An initial capital cost estimate has been prepared at **£550,000** - to include, design supervision, materials, plant and labour and contract contingency and project risk. Also included is a modest sum for providing three specialist chairs. No allowance has been made in this figure for lifetime costs maintenance and other features mentioned above but a reasonable estimate would be £10,000 pa.
- 1.13.6. Specialist, 'balloon tyred', chairs are available, in a number of configurations, starting at around £3,000 each.
- 1.13.7. Other options have not been costed at this point.

### **1.14. Location**

- 1.14.1. If an option were selected which involved a new structure (options 6, 7 & 8), the impact it would have on the coastal processes would be an important factor in determining location. In terms of optimum beach responses to additional structures, a location between the new seawall west of the Pier and Rock Gardens (i.e. at West Street) is considered preferable. This is because the beach is relatively narrow but not too narrow to the point where waves regularly interact with the seawall. The beach here fluctuates less than at almost any other location along the central area; it also has easy highway access. Artificial projections into the sea would effect currents and could have wide ranging implications for the erosion and deposition of beach material (sand as well as shingle).
- 1.14.2. A 'buggie' option could be provided at various locations, near to the current Foreshore Station may be preferable but increased beach steepness would be an issue here.

### **1.15. Consultation**

- 1.15.1. No substantive consultations on the options have taken place with stakeholders to date.
- 1.15.2. Consultation with a range of stakeholders will form part of progressing an option.

1.15.3. Notwithstanding the proposals as set out in 2. (below), if the timber piled option were to be progressed, it would be extremely worthwhile to create a full size 'mock-up' on dry land, (with scaffolding or similar), to explore whether it would achieve to aims of the project and be usable by all of the intended user groups.

#### **1.16. Partnering Arrangements**

1.16.1. Discussions were had with Bognor Regis Town Council regarding the maintenance of the decking mentioned in para 1.1.6. If options 4 &/or 5 or 7 are investigated further, discussion with Bognor Regis Town Council could be had to explore whether they could assist with the ongoing maintenance or operational requirements.

1.16.2. There would be no coastal defence grant aid available as the ramp (or any of the options included here) would not serve any coastal defence function.

1.16.3. Funding may be available from other sources – this could be explored further.

## **2 PROPOSALS**

That Cabinet:

1) Note the Report.

2) Agree not to pursue options 1, 2, 3, 6 or 8.

3) Endorse further investigation and potential viability of options 4, 5 & 7 as a means of improving access to the lower beach at Bognor Regis, with findings and further recommendation to be reported back to the relevant committee.

## **3. OPTIONS:**

- 1 Undertake further investigations into the provision and operation of the 'buggie' or 'shuttle' options, as well as a permanent timber piled ramp; with a detailed report being brought back to Cabinet to include lifetime maintenance plan and costings to enable a decision as to whether or not to proceed.
- 2 The progression of the timber piled option (including the design and technical studies necessary to obtain accurate costings), endorsing making budgetary provision of £550,000 in the capital budget for 2021/22 and a detailed report being brought back to Cabinet to include lifetime maintenance plan and costings to enable a decision as to whether or not to proceed to tender stage.
- 3 progression of one of the other options accepting that would not be Equalities compliant and likely not achieve the aims of the project
- 4 not to progress any option at this stage

## **4. CONSULTATION:**

**NB – as consideration of this matter is at an early stage, no consultation has taken place**

Has consultation been undertaken with:	YES	NO
Relevant Town/Parish Council		✓
Relevant District Ward Councillors		✓
Other groups/persons (please specify)		✓
<b>5. ARE THERE ANY IMPLICATIONS IN RELATION TO THE FOLLOWING COUNCIL POLICIES: (Explain in more detail at 6 below)</b>	<b>YES</b>	<b>NO</b>
Financial	✓	
Legal		✓
Human Rights/Equality Impact Assessment	✓	
Community Safety including Section 17 of Crime & Disorder Act		✓
Sustainability	✓	
Asset Management/Property/Land	✓	
Technology		✓
Other (please explain)		✓
<b>6. IMPLICATIONS:</b>		
<p>Taking forward any of the “do something” options would necessitate additional funding which would worsen the Council’s budget deficit for 2021/22.</p> <p>The provision of better beach access must take account fully the needs of the disabled</p> <p>Materials and construction methods to be sustainable e.g. ensure use of certified timbers and not releasing microplastics into the sea.</p> <p>The land upon which any facility is provided will be owned/controlled by Arun DC and as such suitable management criteria need to be applied</p>		
<b>7. REASON FOR THE DECISION:</b>		
To provide the Council with a way forward in terms of Member ambitions to improve public/disabled beach access in Bognor Regis.		
<b>8. EFFECTIVE DATE OF THE DECISION: 25 November 2020</b>		

**9. BACKGROUND PAPERS:**

Planning and access for disabled people: a good practice guide (2003) [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7776/156681.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7776/156681.pdf) NB this document was withdrawn in 2014 and its guidance incorporated into various aspects of the National Planning Policy Framework – however, its contents are still considered valid and contained within a single reference.

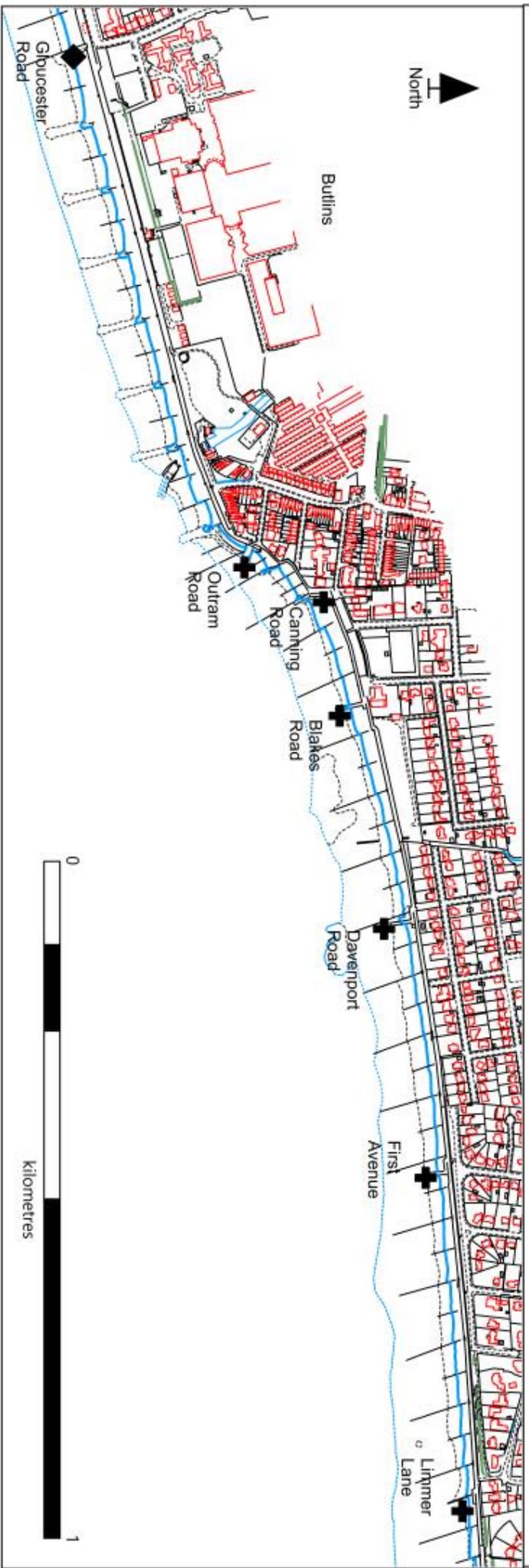
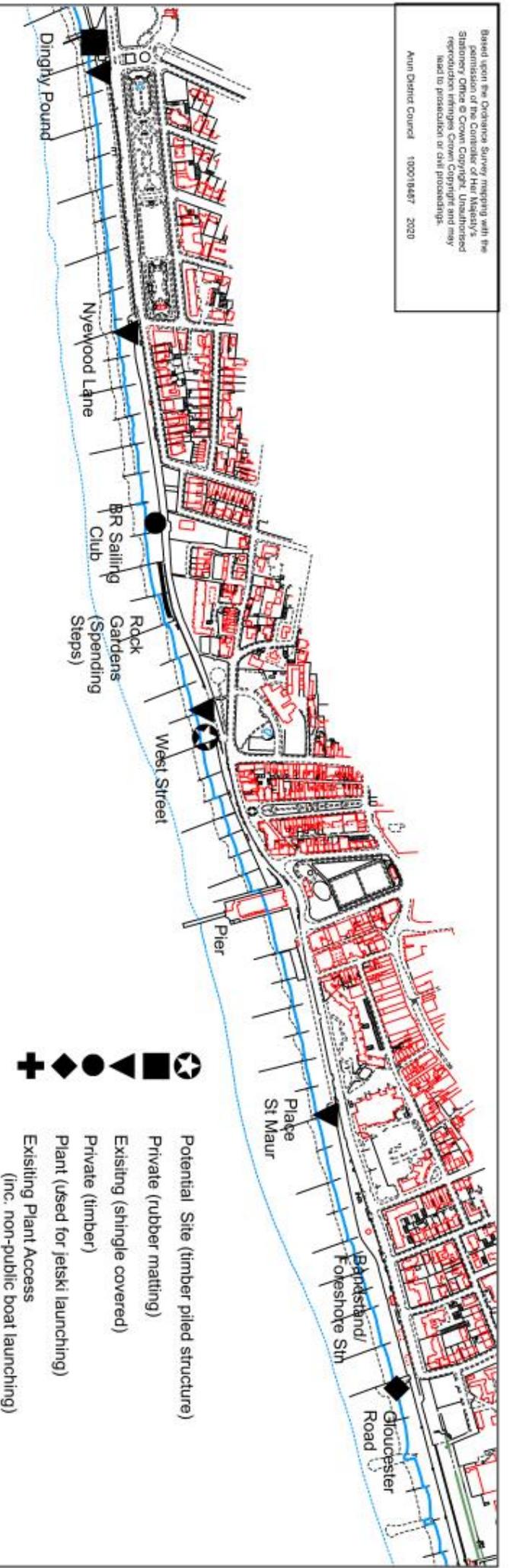
Channel 4 Television programme featuring Brighton Beach

[http://www.chortle.co.uk/news/2020/10/14/47100/rosie\\_jones\\_makes\\_c4\\_travel\\_series](http://www.chortle.co.uk/news/2020/10/14/47100/rosie_jones_makes_c4_travel_series)

Equalities Impact Assessment

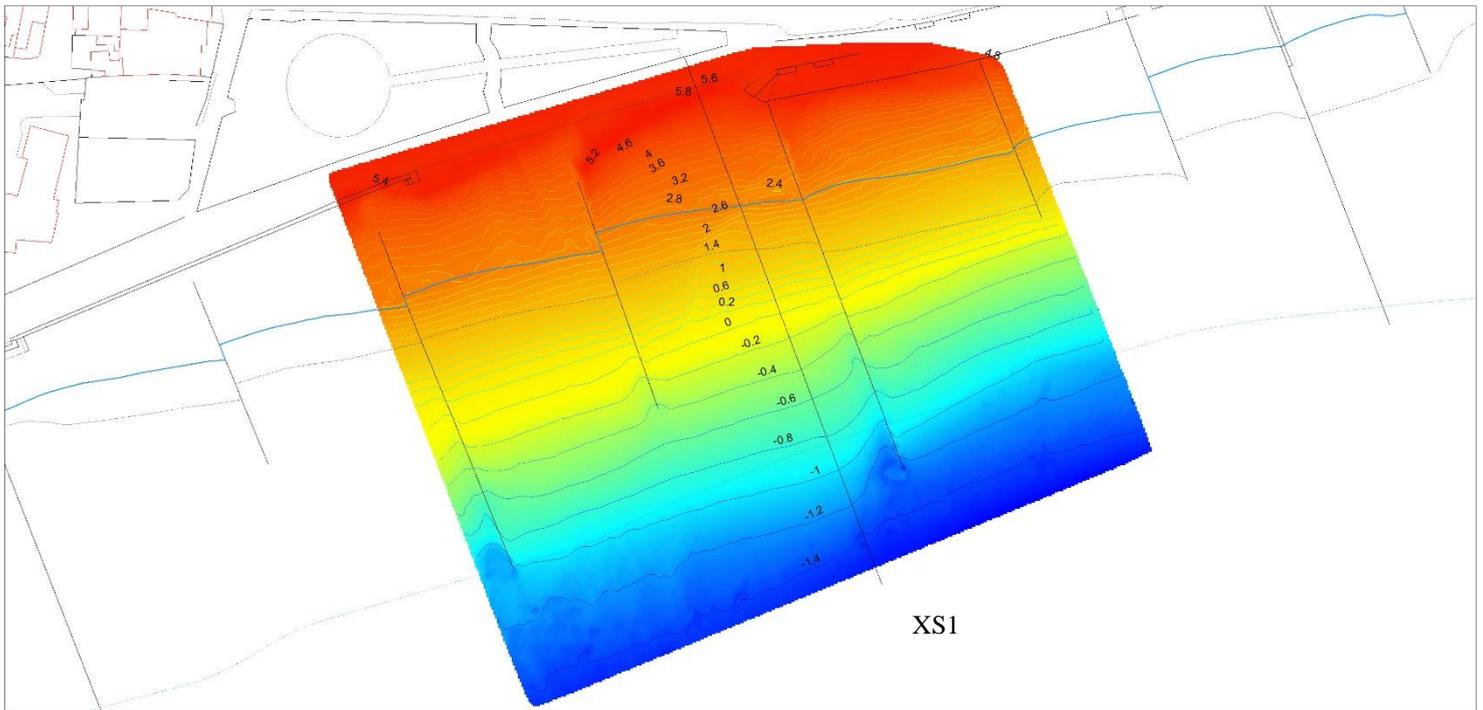
Based upon the Chertsey Survey mapping with the permission of the Corn Law of 1847. All rights reserved. This map is a reproduction of the original map and may lead to prosecution or civil proceedings.

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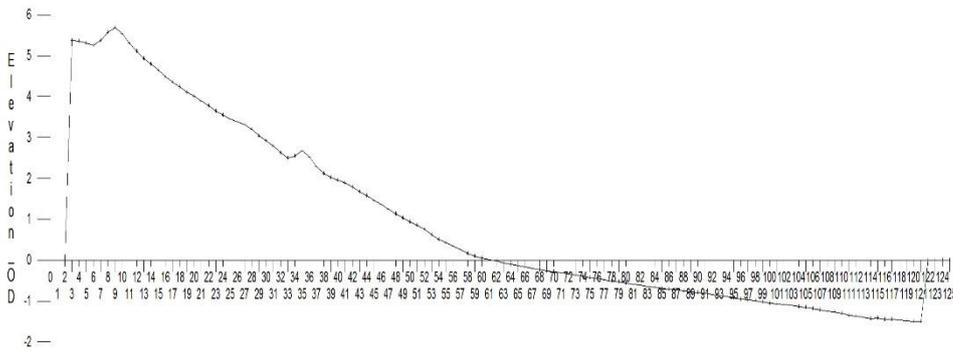


# Contoured beach Levels at West Street

# Appendix 2



Graph of: xs1



Height OD	Edge of Prom	Om
5	x	10
4.667	x	16.5
4.334	x	23
4.001	x	29.5
3.668	x	36
3.335	x	42.5
3.002	x	49
2.669	x	55.5
2.336	x	62
2.003	x	68.5
1.67	x	75
1.337	x	81.5
1.004	x	88
0.671	x	94.5
0.338	x	101
0.005	x	107.5

Diagrammatic plan of 'zig-zags'

Height OD	Edge of Prom	0
5.000	x	10
4.334	x	14
3.668	x	18
3.002	x	22
2.336	x	26
1.67	x	30
1.004	x	34
0.338	x	38
0.005	x	42

Height OD	Edge of Prom	Distance
5.000	x	10
4.001	x	17
3.668	x	24
2.669	x	31
2.336	x	38
1.337	x	45
1.004	x	49
0.005	x	56
0.005	x	60