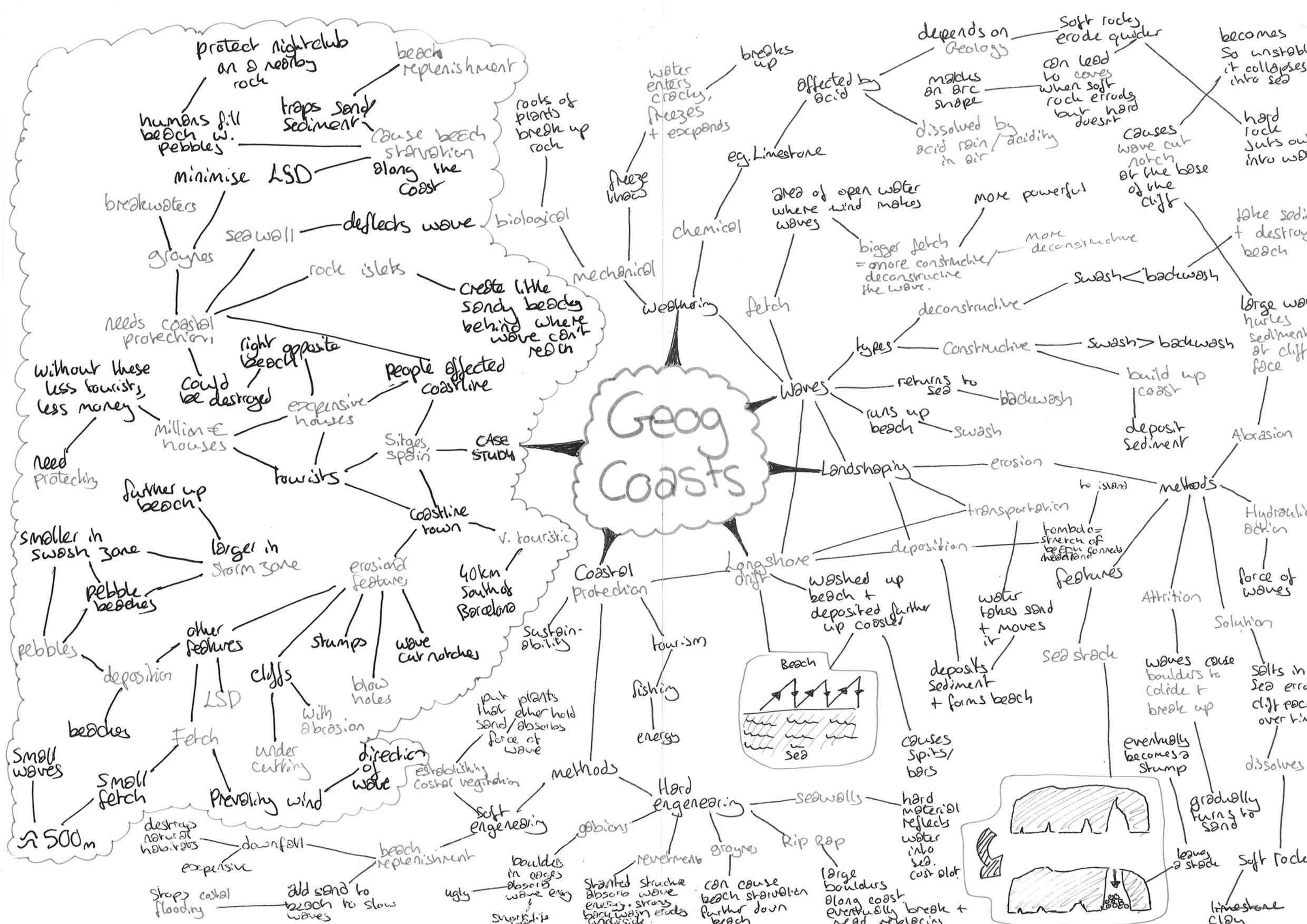
Geog Coasts
protect nightclub on a nearby rock
beach replenishment
traps sand/sediment
humans fill beach w. pebbles
cause beach starvation along the coast
minimise LSD
breakwaters
groynes
seawall
deflects wave
rock islets
create little sandy beaches behind where wave can't reach
needs coastal protection
right opposite beach
could be destroyed
people affected coastline
without these less tourists, less money
expensive houses
million € houses
need protecting
Sitges, spain
CASE STUDY
tourists
further up beach
coastline town
v. touristic
40km South of Barcelona
smaller in swash zone
larger in storm zone
pebble beaches
erosional features
pebbles
other features
stumps
wave cut notches
deposition
cliffs
blow holes
LSD
beaches
with abrasion
Fetch
under cutting
direction of wave
Small waves
small fetch
Prevailing wind
≈500m
roots of plants break up rock
biological
water enters cracks, freezes + expands
breaks up
freeze thaw
mechanical
weathering
chemical
eg. Limestone
affected by acid
depends on Geology
soft rocks erode quicker
makes an arc shape
can lead to coves when soft rock errods but hard doesn't
dissolved by acid rain / acidity in air
becomes so unstable it collapses into sea
hard rock juts out into wa
causes wave cut notch at the base of the cliff
area of open water where wind makes waves
more powerful
bigger fetch = more constructive / deconstructive the wave.
more deconstructive
fetch
take sedi + destroy beach
swash < backwash
large wa hurles sediment at cliff face
deconstructive
types
constructive
swash > backwash
build up coast
deposit sediment
Waves
returns to sea
backwash
runs up beach
swash
Abrasion
Landshaping
erosion
methods
to island
transportation
Hydraulic action
tombolo = stretch of beach connects headland
deposition
Longshore drift
washed up beach + deposited further up coastal
water takes sand + moves it
features
Attrition
force of waves
Solution
Coastal protection
sustainability
tourism
fishing
energy
Beach
sea
deposits sediment + forms beach
causes spits/bars
sea stack
waves cause boulders to colide + break up
salts in sea erro cliff fac over ti
eventually becomes a stump
dissolves
gradually turns to sand
leaves a stack
soft rock
limestone clay
put plants that ether hold sand/absorbs force of wave
establishing costal vegitation
methods
Hard engeneering
seawalls
hard material reflects water into sea. cost alot
soft engeneering
gabions
boulders in cages absorb wave energy
ugly
revetments
stanted structure absorb wave energy. strong backwash erodes underside
groynes
can cause beach starvation further down beach
Rip Rap
large boulders along coast eventually break + need replacing
destroys natural habitats
downfall
expensive
beach replenishment
stops costal flooding
add sand to beach to slow waves