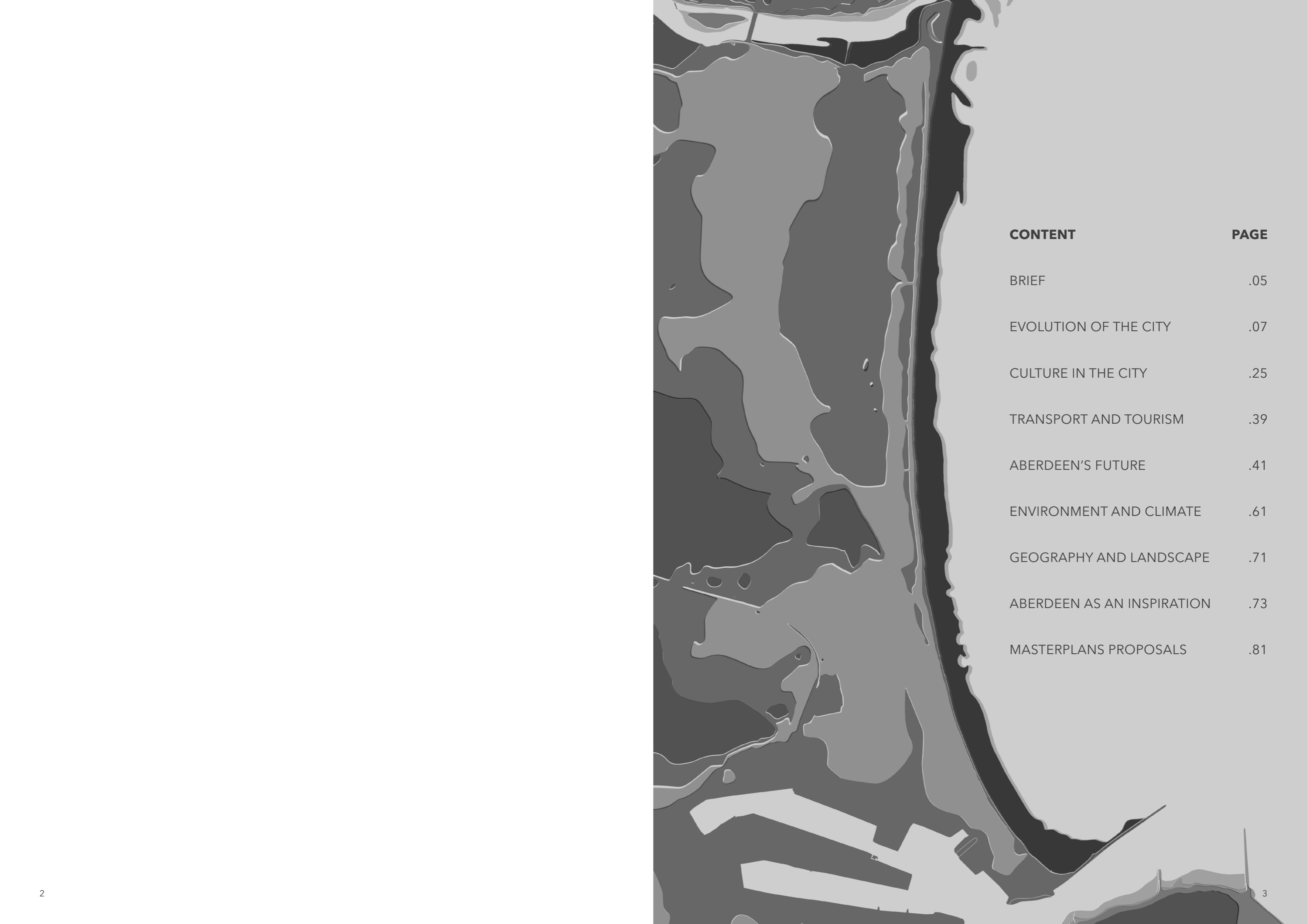


A stylized, high-contrast map of the Aberdeen waterfront. The map is rendered in shades of gray, with the landmasses in light gray and the water in dark gray. The coastline is irregular and jagged, with several small islands and peninsulas. The map is oriented vertically, with the landmasses on the left and the water on the right. The text 'unit|one' and 'aberdeen waterfront' is located in the top right corner of the image.

# unit|one

aberdeen waterfront

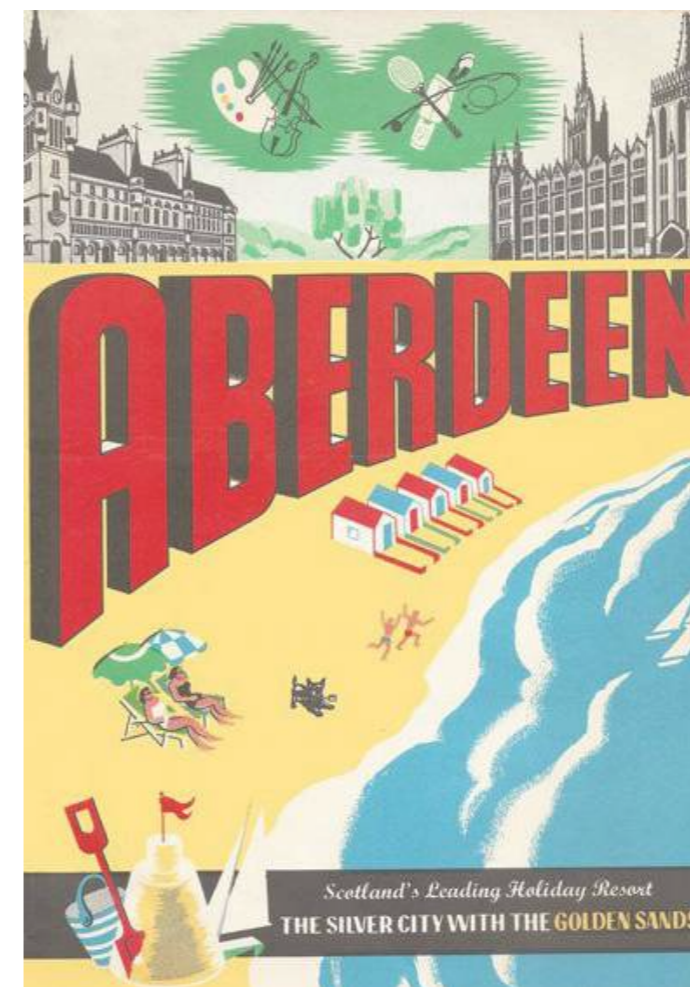


CONTENT	PAGE
BRIEF	.05
EVOLUTION OF THE CITY	.07
CULTURE IN THE CITY	.25
TRANSPORT AND TOURISM	.39
ABERDEEN'S FUTURE	.41
ENVIRONMENT AND CLIMATE	.61
GEOGRAPHY AND LANDSCAPE	.71
ABERDEEN AS AN INSPIRATION	.73
MASTERPLANS PROPOSALS	.81



"Aberdeen is the paragon of Scotland. Its banks bathed with the glittering streams of Dee, and her walls shaded with fertile cornfields ... the buildings of this city are framed with stone and timber; facing the sun and fronting this pleasant harbor; the streets also are large and spacious, and the walls strengthened with towers and buttresses of stone"

Daniel Defoe c 1710



## PROJECT BRIEF

Aberdeen's life as a city has always been dictated by its relationship with its rivers and the sea. In the not too distant past the main lines of communication were by sea to destinations in the south or more commonly to the Baltic and mainland Europe. This association is ever evolving, and indeed we live in a further period of change today.

Despite being a city located on the coastline and one of but a few cities with a harbor located at its heart Aberdeen has always had a somewhat reserved relationship with the sea, suggesting how the sea was regarded by previous generations. The city is set back from the coastline separated by a strip of 'machair or links', bounded by sand dunes and a golden sandy beach.

This land has had many historic uses and in not too recent memory the seafront was a regarded as a real asset to the city with important civic structures. Over time something changed and more recent additions have mostly seen piecemeal development of low quality buildings that deploy an industrial language paying little regard to the contribution they make to the public

realm.

There has been a growing realization that the bounties of the past fifty years have not added to the legacy of spaces and places in the city and that the bountiful period of oil extraction may have brought about personal and commercial wealth but as we move into a period of sustained decline the industry and the city's population realize that they need to prepare sustainable plans for a post oil economy and a successful future for the city.

A real impetus has developed with strategic partnerships emerging that are keen to engage in debate about the future, not least the next generation as they have the most to gain from a sustained and effective long term plan for the city's future.



## EVOLUTION OF THE CITY

WE BELIEVE WE CAN HAVE AN IMPACT ON  
THE CITY'S DEVELOPMENT

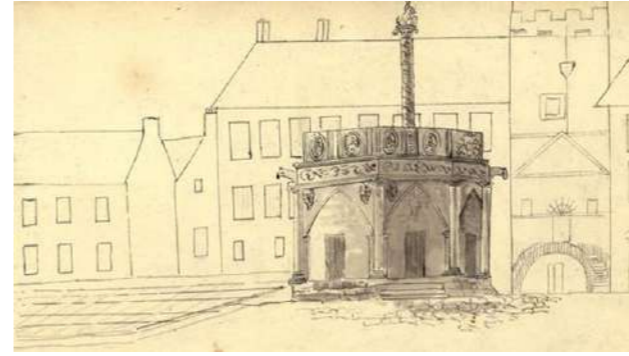
## DEVELOPMENT OF THE CITY



1320 | Brig O'Balgownie | Richard Cementarius



1545 | Provost Skene's House | Unknown



1686 | Market Cross | John Montgomery



1741 | Woolmanhill Hospital | William Christall



1801 | Union Street | Unknown



1808 | New Footdee | John Smith



1820 | Music Hall | Archibald Simpson



1830 | Bridge of Don | John Gibb, John Smith & Thomas Telford



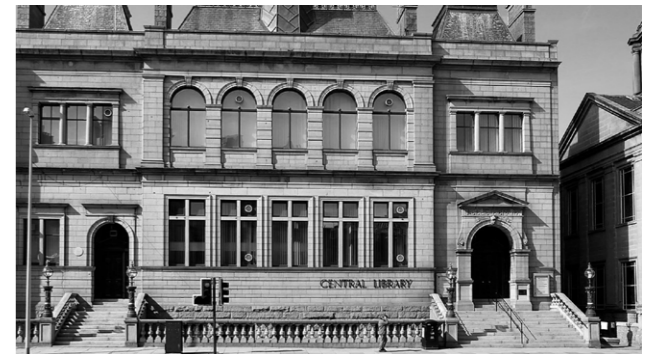
1833 | Girdleness Lighthouse | Robert Stevenson



1871 | Her Majesty's Theatre | C. J. Phipps & James Matthews



1881 | Victoria Bridge | Edward L J Blyth



1884 | Aberdeen Central Library | George Watt



1885 | Aberdeen Art Gallery | Alexander Marshall Mackenzie



1898 | Beach Baths | John Rust



1906 | Marischal College | Archibald Simpson & Alexander Marshall Mackenzie



1906 | His Majesty's Theatre | Frank Matcham



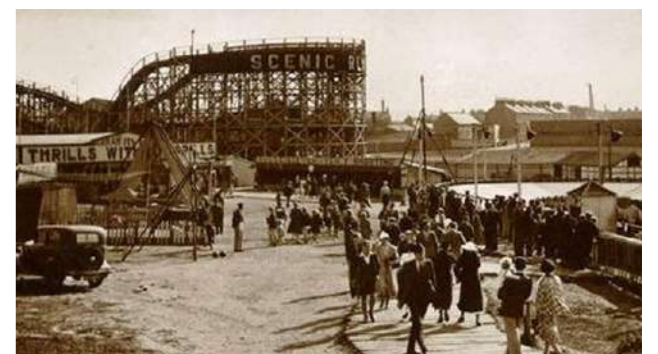
1929 | Beach Ballroom | Thomas Roberts & Hume



1934 | Aberdeen Airport | Unknown



1940 | Bon Accord Baths | Alexander McRobbie



1969 | Codona's Amusements | John Codona

## DEVELOPMENT OF THE CITY

These maps have been designed to visually represent the differences between the current layout of Aberdeen and a past plan of the settlement.

The areas shown black represent the standing buildings from the year stated below graphic, whilst the grey highlights the site as it is today.

As you can see Aberdeen has expanded vastly. It began in a few key area, for example; the harbour, King Street and Footdee, and has progressively stretched across the land between the two rivers. Now, Aberdeen City fills most of the space between the two rivers, but has still maintained the links as a green space.

The purpose of these maps are to visually show the evolution of our site and the surrounding area over time. The map on the left highlights the buildings currently standing on the site. Whilst the map on the right shows how Aberdeen has progressed into the much larger city that it is now. The map denotes the earliest settlement of Aberdeen in Black and shows its growth in different hues of grey.



1885-1900



1890-1913



1944-1975



2018

EMPLOYMENT IN THE CITY & INDUSTRIES

ABERDEEN TEXTILE INDUSTRY

Aberdeen has made a success of several different textiles. They began with the Linen mainfacting which was originally introduced in 1749 by a company from Edinburgh. They then began to manufacture cotton in 1779 after Messrs . Gordon, Barron and Company introduced it. They extablied a spacious bleaching and printing field at Woodside, then erected a large mill for spinning cotton-yarn. The woollen manufacturing was next to follow, at the beginning of the 18th century. in 1858 they had 700 workers, 550 of them were under the age of 18. The carpet trade was also a great success with about 2500 people being employed by it. The carpet manufacturing had an annual value of £50,000, tweed manufacturing at more than £120,000 and Wincey was manufacturing at least £250,000.

GRANITE

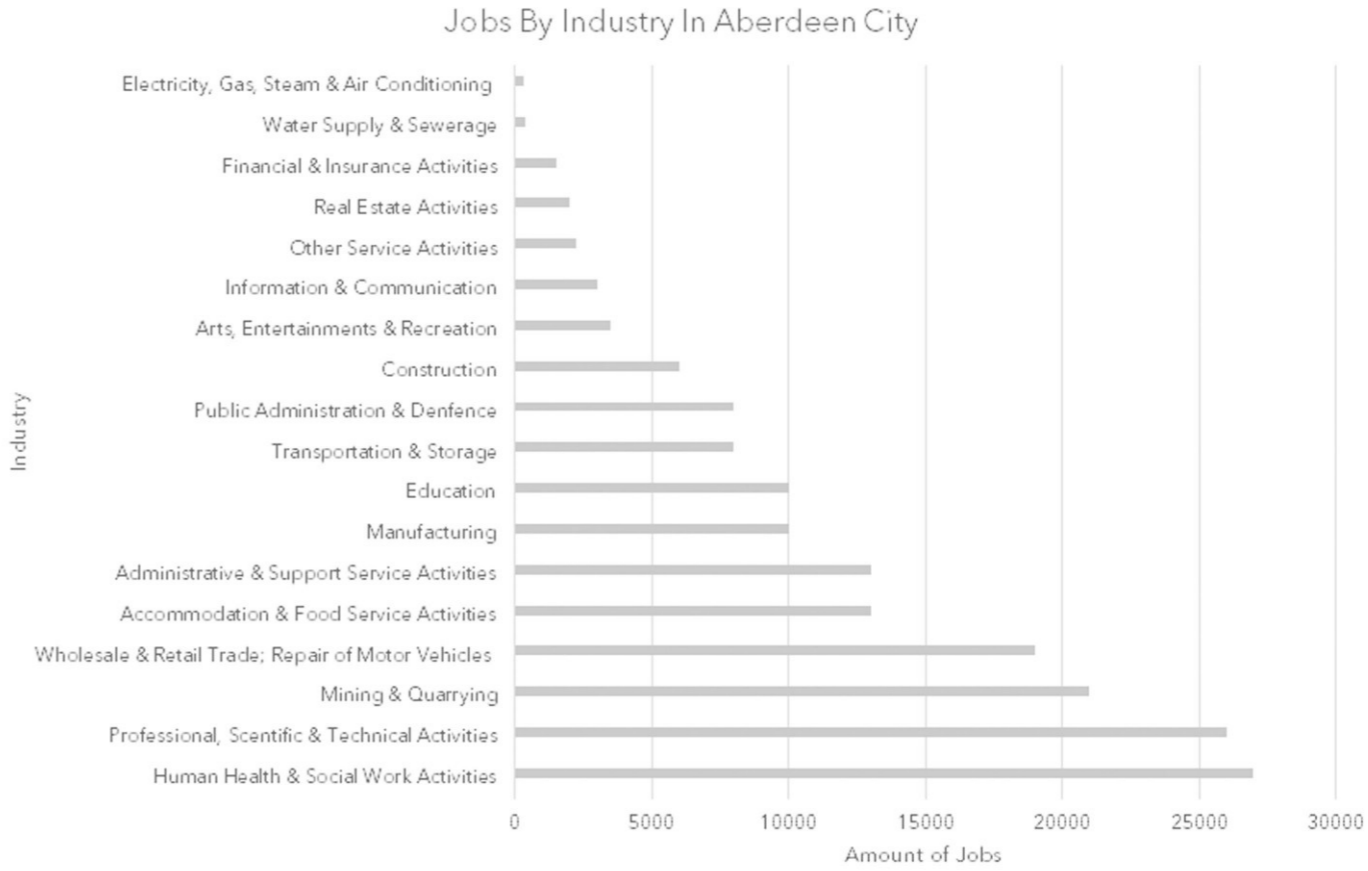
The Aberdeen granite industry developed from the 18th century, with stone first sent to London for paving in 1764 and the construction of Portsmouth Docks a few decades later. Through the 19th century the industry expanded and the area became a world-renowned producer of granite. The industry was of huge importance to the local economy, and materials and skills were so plentiful that much of the City of Aberdeen was constructed from granite.

FISHING

In 1820, 15 vessels from Aberdeen were engaged in the northern whale and seal fishing; in 1860, one vessel, but none since. The white fishing at Aberdeen employs some 40 boats, each with a crew of 5 men. Of the 900 tons wet fish estimated to be brought to market yearly, above a third are sent fresh by rail to England. The salmon caught in the Dee, Don, and sea are nearly all sent to London fresh in ice. The herring fishing has been introduced since 1836, and from 200 to 350 boats are engaged in it.

SHIPBUILDING

Aberdeen has been famed for Shipbuilding especially for its fast clippers. Since 1855 nearly a score of vessels have been built of above 1000 tons each. The largest vessel (a sailing one) ever built here was one in 1855, of 2400 tons. In 1872 there were built 11 iron vessels of 9450 tons, and 6 wooden of 2980 tons, consuming 5900 tons Iron and costing £252,700, including £60,700 for engines and other machinery. 1400 hands were employed in shipbuilding in that year, at the weekly wages of about £1230.



Total number of Jobs in Aberdeen: **173,000**

Highest jobs in **Human Health & Social Care Sector** (27,000)

Lowest Jobs in **Electricity, Gas, Steam & Air Conditioning** (300)

## EXISTING LAND USE

Overall size of site: **397 hectares**  
 Sport & Leisure Facilities: **80 hectares**  
 Residential Use: **64 hectares**  
 Beach: **61 hectares**  
 Commercial Use: **41 hectares**  
 Schools & Churches: **2 hectares**

Other (Roads, Landscaping, Graveyards, Car Parks etc.)  
**149 hectares**



## CURRENT DEVELOPMENTS IN ABERDEEN | PART OF PHASE 1 OF THE CITY CENTRE MASTERPLAN

### ART GALLERY

HOSKINS ARCHITECTS

Completion date : Autumn 2019 | Cost: £30 million

Increased number of gallery spaces, new rooftop gallery space and two new dedicated learning suites.



Art Gallery

### ABERDEEN MUSIC HALL

BDP

Completion date: End of 2018 | Cost: £8 million

New seating, flooring and flexible staging, new performance, rehearsal and education spaces, new foyer, box office and café bar and improved accessibility.



Aberdeen Music Hall

### UNION TERRACE GARDENS

LDA Design

Completion date: Summer 2020 | Cost: £30 million

New accessible path from union street into gardens, including lift access and improved disabled parking, reinstating the grand staircase from Rosemount Viaduct.



Union Terrace Gardens

### HAUDAGAN BY-PASS

ABERDEEN CITY COUNCIL

Completion date: Unknown | Cost: £18 million

Traffic improvement scheme to improve traffic flow around the Haudagain By-Pass.



Haudagan By-pass

### BERRYDEN CORRIDOR

ABERDEEN CITY COUNCIL

Completion date: Unknown | Cost: £26.4 million

Traffic improvement scheme, in association with Diamond Bridge and the Haudigan By-Pass.



Berryden Corridor

## CURRENT DEVELOPMENTS IN ABERDEEN | PROJECTS

### BLACKDOG MASTERPLAN | ASHFIELD LAND

Completion date: Unknown | Cost: £150 million

550 new homes

A regional Food Hall, Cinema, Hotel & Restaurants and commercial units.



Blackdog Masterplan

### KINGSFORD FOOTBALL STADIUM

HOLMES MILLER ARCHITECTS

Completion date: Summer 2020 | Cost : £50 million

Event complex, including: 3 training pitches, 2 community 3G pitches, community pavilion with changing facilities, offices, gymnasium and multipurpose space, 20,000 capacity stadium, fan-zone, AFC club store, AFC heritage museum and memorial garden, 1600 car parking space



Kingsford Football Stadium

### ABERDEEN EXHIBITION & CONFERENCE CENTRE

HENRY BOTTS

COMPLETION DATE: 2019 / £333 million

Event complex, including; new arena, conference halls and subterranean multipurpose space, an energy Centre, Hilton and Aloft Hotels and car parking and public space



Exhibition and Conference Centre

### ABERDEEN WESTERN PERIPHERAL ROUTE

TRANSPORT SCOTLAND

Completion date: Winter 2018 | Cost: £745 million

Traffic improvement scheme, creating a route from north to south around the city, reducing the amount of traffic within the city.



Aberdeen Western Peripheral Route

### TRIPLE KIRKS STUDENT ACCOMMODATION

DANDARA

Completion date: 2019 | Cost: £20 million

Scheme was originally designed as office accommodation, developer changed concept to student accommodation complex, including; 175 Studio Flats and 166 En-suite Rooms, Gym, Café, Cinema Room, Games Room, Common Room.



Triple Kirks Student Accommodation



## CULTURE IN THE CITY

WE BELIEVE WE CAN ENHANCE  
ABERDEEN'S CULTURE

### MUSIC IN ABERDEEN

The Music Hall was very popular when it was built (1858) and continued to be popular with orchestra, classical, jazz, rock, folk and pop until its closure for refurbishment. With its current capacity of 1281 the hall was almost always full for classical performances. The current refurbishment is focused on improving disabled accessibility, which may decrease its capacity but it will be more accessible to the less able bodied and have a fuller programme with more going on during the day after its reopening.

The refurbishment hopes to regenerate traffic Union Street, generating more business for service providers - shops, restaurants, hotels - boosting the evening economy, bringing more visitors, improving the built environment and helping to make Aberdeen a great place to live, work and visit.

First films in Aberdeen were shown in the music hall in 1896, commencing the cinema culture.

### CINEMAS IN ABERDEEN

At its peak, there used to be 34 operating cinemas in Aberdeen. Belmont Filmhouse is the oldest one, built in 1896, the same year as cinematography was invented. Most of them closed between 1960s and 1990s as TVs and DVDs became more available and affordable and people were able to watch the movies anytime. Most of the old cinema buildings were converted to shops or office spaces, a lot of them, including the Torry Filmhouse were demolished.

Now there are only 4 cinemas left in the city.



The Music Hall



Cinemas in Aberdeen



## MUSEUMS IN ABERDEEN

### MARITIME MUSEUM

It receives peak traffic in holidays and weekends, especially in bad weather. A popular attraction for school groups. There is no official count of visitors as the admission is free.

### GORDON HIGHLANDERS MUSEUM

“The Finest Regiment in the World” was how Sir Winston Churchill described The Gordon Highlanders in 1900. A member of staff in Maritime Museum said that influx of visitors is expected with the reopening of the art gallery and music hall.

### TOLLBOOTH MUSEUM

Also very popular due to its free admission. One of Aberdeen’s oldest buildings and best preserved 17th century gaols in Scotland, it features crime and punishment through the centuries.



Aberdeen Maritime Museum



Gordon Highlanders Museum



Tollbooth Museum

## THEATRES IN ABERDEEN

### HIS MAJESTY'S THEATRE

It opened in 1906. Built by local tradesmen and, to showcase the fine craftsmanship of Aberdeen. It has the capacity of 1491 and during peak times on Friday and Saturday, the shows are almost always sold out.

### TIVOLI THEATRE

Founded in 1872, it was closed and reopened many times. It has been restored many times to keep up with the increasing demands of the entertainment arts industry. It stood unused since 1997 but it has been taken care of since 2009. It has the capacity of 450. It has now become a public attraction near Union Square.

### LEMON TREE

Its capacity is 550, just like HMT it sells out on Friday and Saturday, mostly depending on the programme.



His Majesty's Theatre



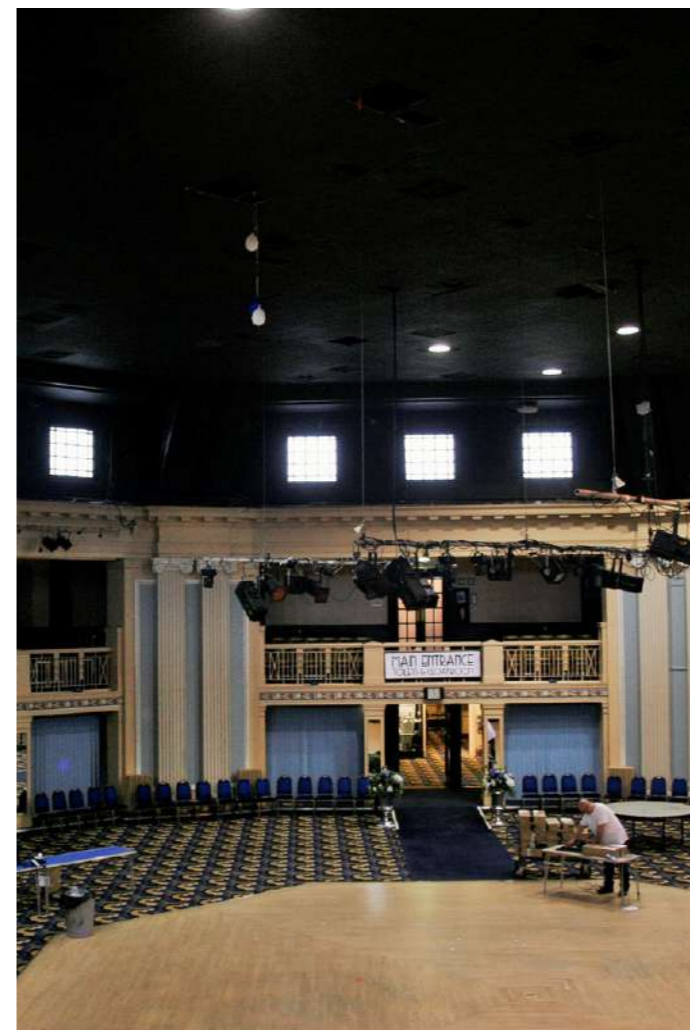
Tivoli Theatre



Lemon Tree

## BEACH BALLROOM

It opened in May 1929 and has the capacity of 1000. There was a lot going on in the beach ballroom during summer, there was everything for the holiday maker. Some of the most famous appearances in the Beach Ballroom include: The Beatles and Pink Floyd. The tourist board did a lot of promotion to encourage people from the south to visit. As international flights became more affordable as decades went on people's demands for holidays got more demanding and elaborate and they flew to Spain for guaranteed sunshine, Aberdeen ceased to be a go-to spot for holidaymakers for people from England and Glasgow.



CORPORATION OF THE CITY OF ABERDEEN

### BEACH BALLROOM AND RESTAURANT

DANCING AFTERNOON AND EVENING  
★  
THURSDAY OLD TIME NIGHT  
★  
Sunday Evening VARIETY BAND SHOW at 8p m

RESTAURANT OPEN DAILY  
★  
LUNCHES AND HIGH TEAS  
★  
Parties Specially Catered for

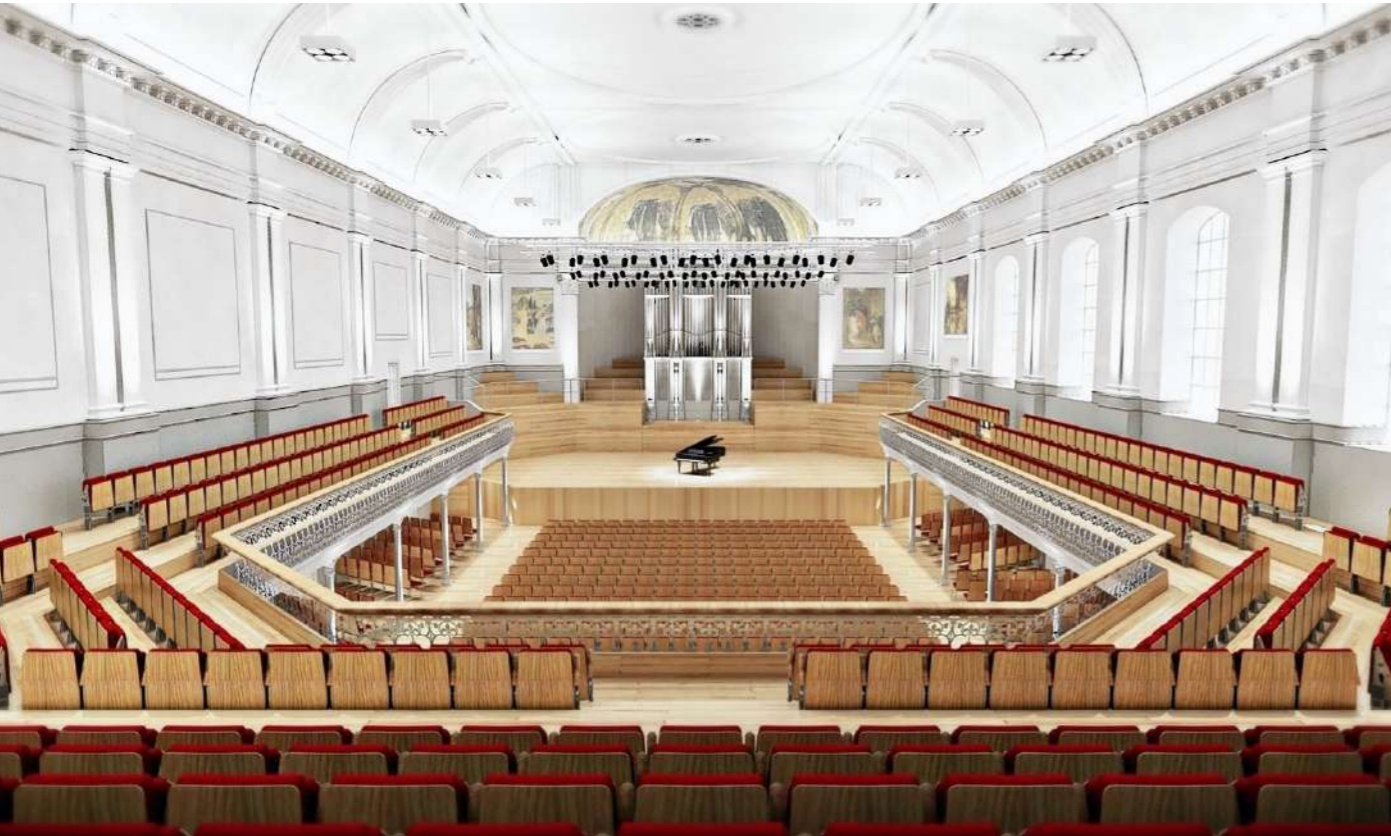
*Scotland's finest social centre*

PRESERVING

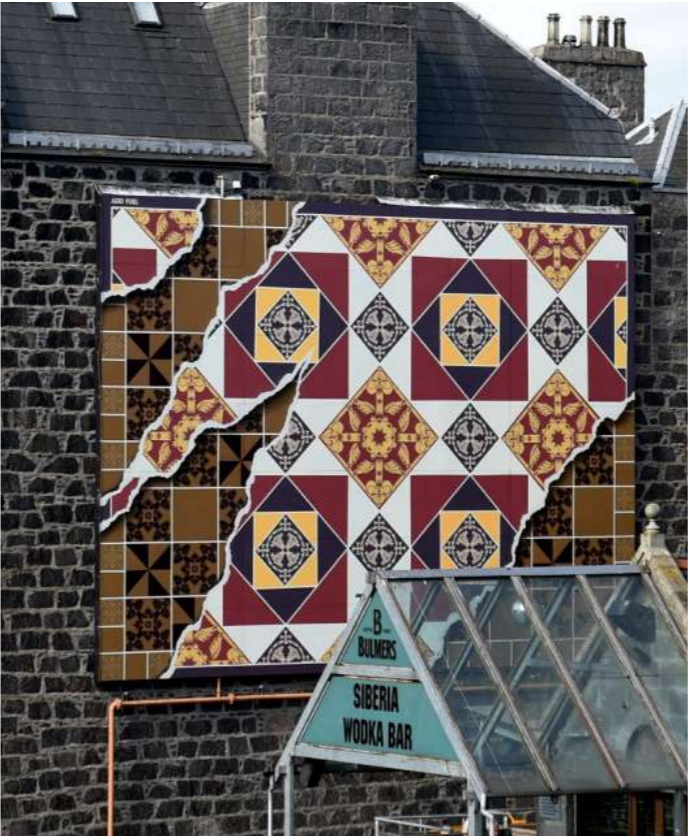
Aberdeen Music Hall | Gareth Hoskins Architects



Aberdeen Music Hall | BDP



STREETARTDISPLAY|NUARTABERDEEN





LIGHTING EXHIBITION | SPECTRA ABERDEEN



VISUAL ART FESTIVAL | LOOK AGAIN



## TRANSPORT AND TOURISM

WE BELIEVE PEOPLE ARE THE DRIVING FACTOR  
BEHIND THE REDEVELOPMENT

TRAVEL TIMES

Travel times by Road

Aberdeen has good links by road to all cities in Scotland, transport links are always being improved by the AWPR bypass nearing completion. The following list shows the average travel times to all cities in Scotland and the maps show the main roads to these cities

Inverness - 2 Hours 38 mins - 103 Miles  
Dundee - 1 Hour 26 mins - 67 Miles  
Perth - 1 Hour 53 mins - 88 Miles  
Glasgow - 2 Hours 46 mins - 146 Miles  
Edinburgh - 2 Hour 40 mins - 128 Mile

Train Travel Times

Scotrail provide the main train services from Aberdeen to the rest of Scotland, Aberdeen also have daily links to England. This List shows the travel times and the maps shows the routes of the train.

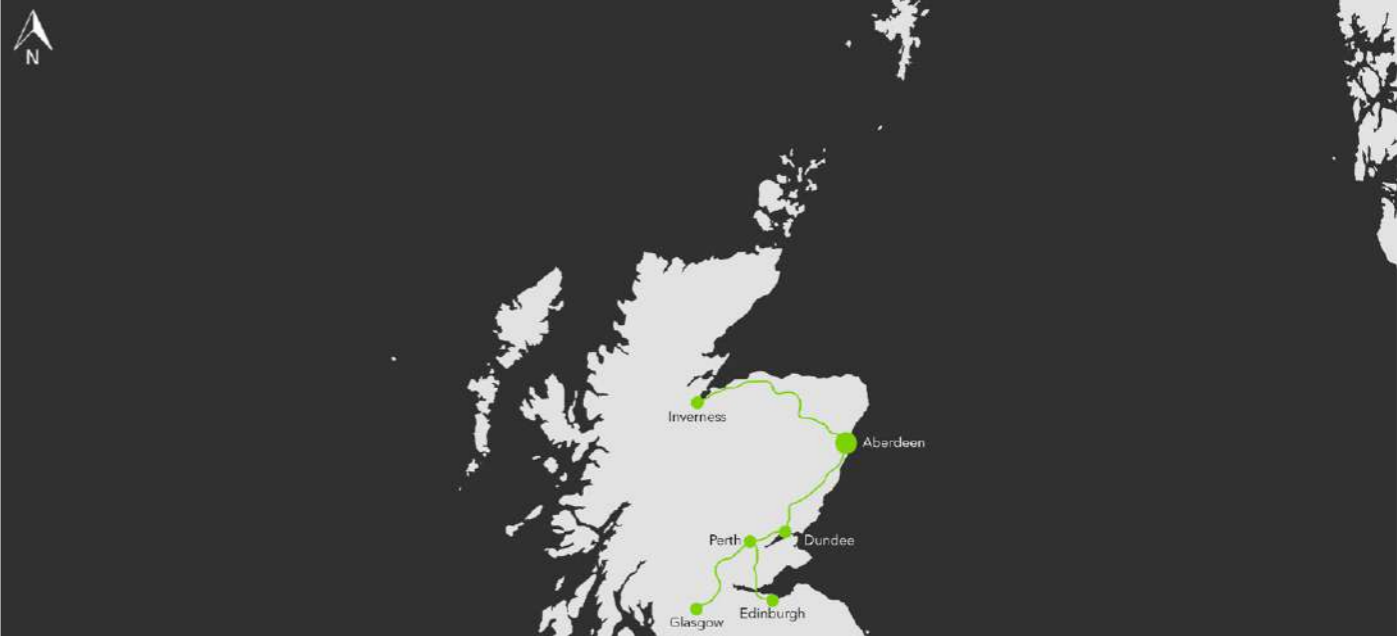
Inverness - 2 Hour 20 Mins  
Dundee - 1 Hour 15 mins  
Perth - 1 Hour 35 Mins  
Glasgow - 2 Hour 30 mins  
Edinburgh - 2 Hour 26 mins

Ferry Times

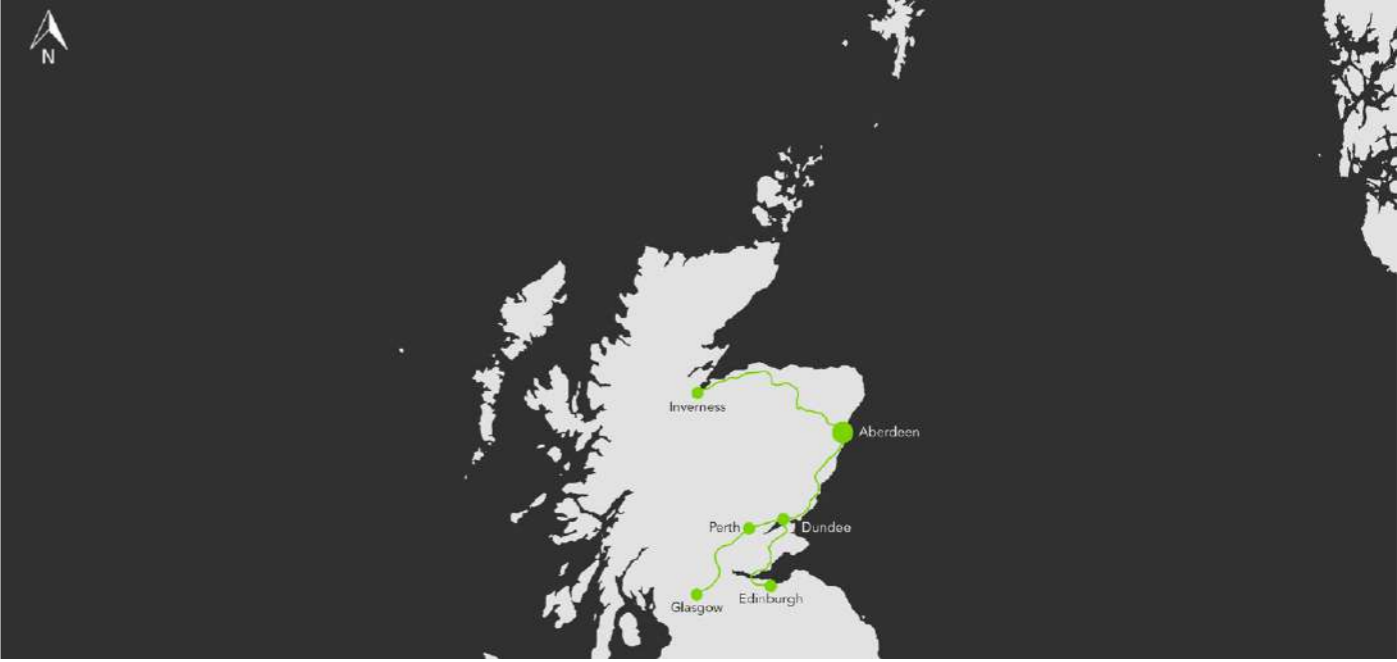
Aberdeen has had a long established link by ferry to the islands, you can take a ferry Shetland and Orkney islands. NorthLink operate sailings from Aberdeen to Lerwick, Aberdeen to Kirkwall and Scrabster to Stromness.

Aberdeen to Kirkwall 6 Hours to Kirkwall 7 Hours 15 mins back to Aberdeen

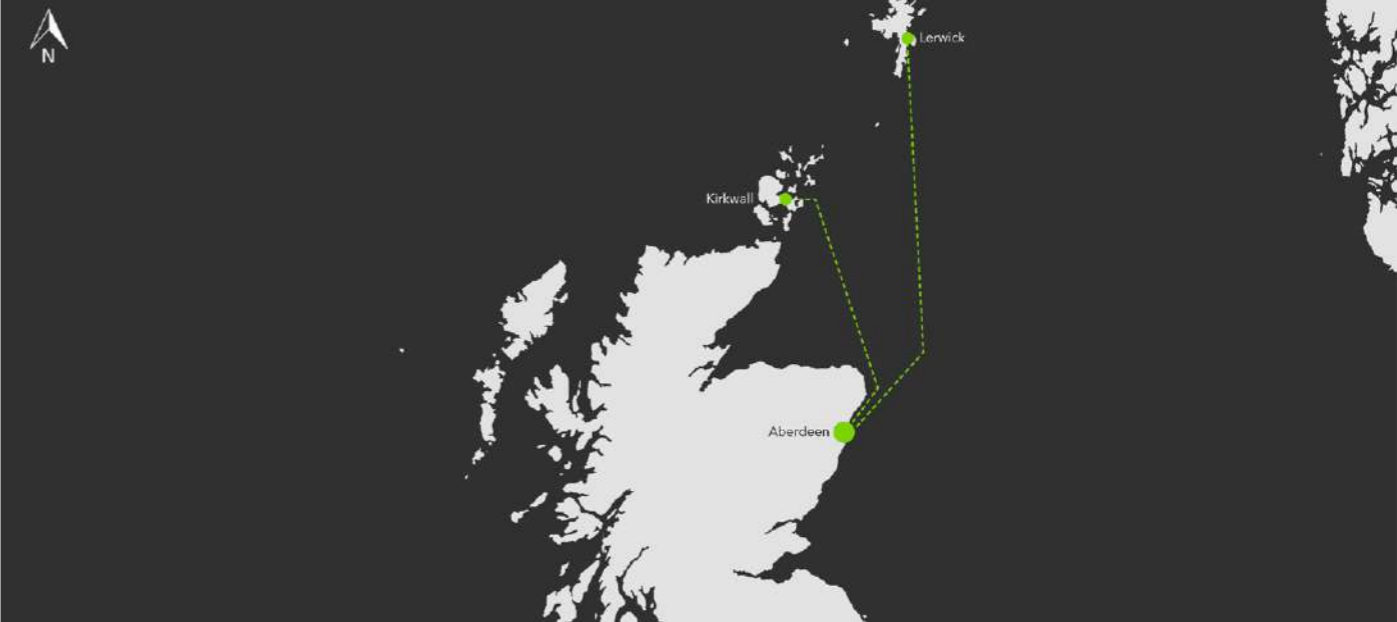
Aberdeen to Lerwick 12 Hours 30 mins 12 Hours back to Aberdeen



Main routes by road from Aberdeen



Rail links from Aberdeen



Ferry routes from Aberdeen

AIRPORT

Aberdeen Airport

The airport opened in 1934 with the intention of linking the north-east of Scotland with London. Today it serves charter holiday flights and is the main heliport for the North Sea oil industry, handling around half a million oil workers a year.

The airport is currently investing in a major three-year expansion project which is set to be complete by 2019. With over £20 million of investment, The programme is aimed at creating the largest transformation of the airport since the current terminal first opened its doors in 1977 at improving passenger facilities, increasing the terminal size by 50% and most importantly steadily growing passenger numbers and bringing more people to the city. With the expansion plan this will hope to attract new destinations and improve the business routes.



Top Destinations from Aberdeen Airport



All Destinations from Aberdeen Airport

## NEW HARBOUR

A new £350 million harbour at Nigg Bay is due to be completed by 2020. This will allow Aberdeen to tap into the growing cruise sector market as larger cruise ships will now be able to berth alongside the dock. Three of the quays will be named Balmoral, Dunnottar and Crathes and the fourth will be named Castlegate after the city centre area of Aberdeen. The royal family, north-east dignitaries and organisations have all backed the move which highlights the history and heritage of the north-east region.

Aberdeen Harbour Board has already taken the first booking for a cruise liner to visit its newlyexpanded harbour. The 11-night voyage begins in Amsterdam and docks at various ports around the north of Scotland before disembarking in Dublin. Docking in Aberdeen for twelve hours, it provides a great opportunity to boost tourism with over 700 people on board. It is hoped the harbour will create 2,300 jobs by 2026.



Top Destinations from Aberdeen Airport

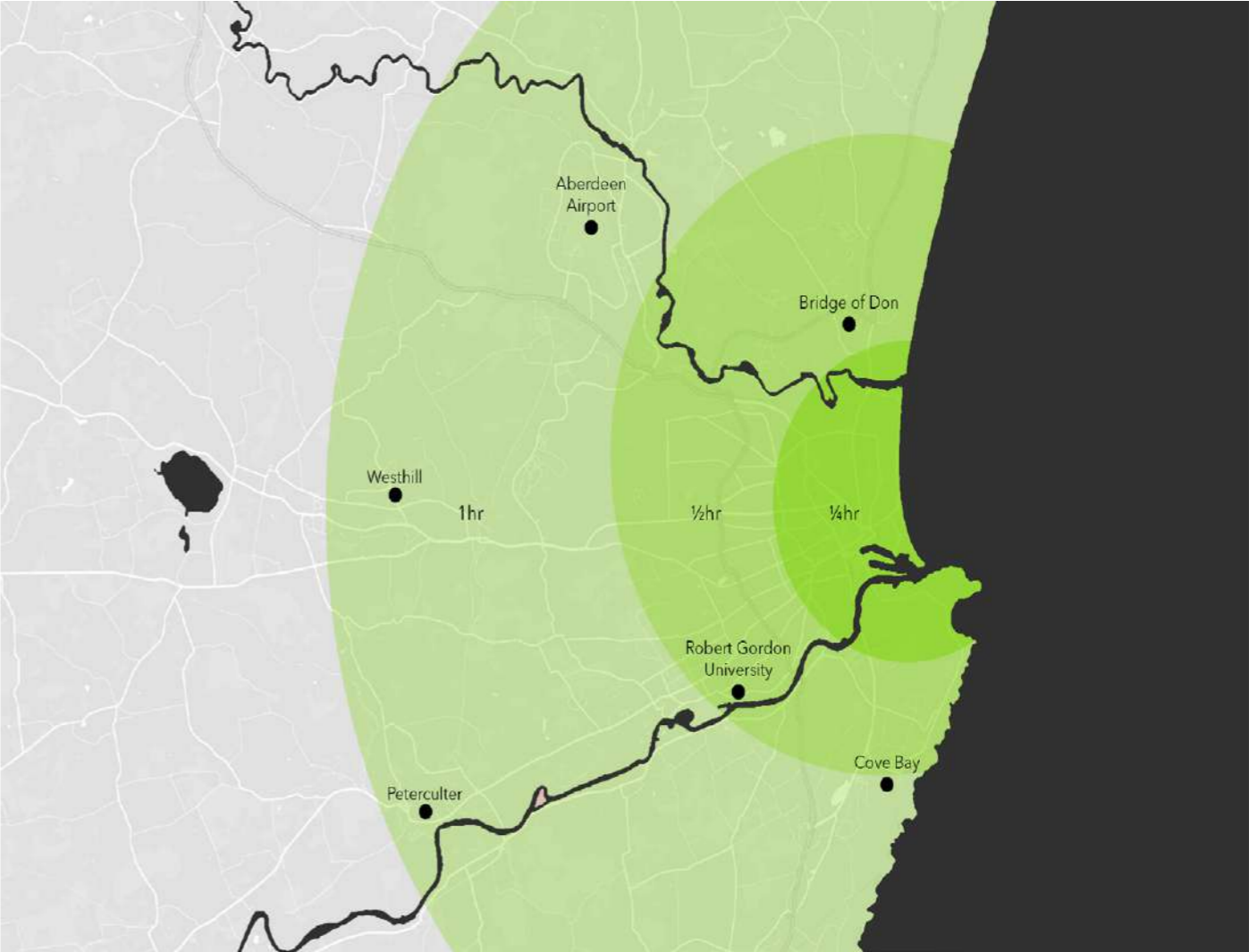


All Destinations for cruise coming to Aberdeen

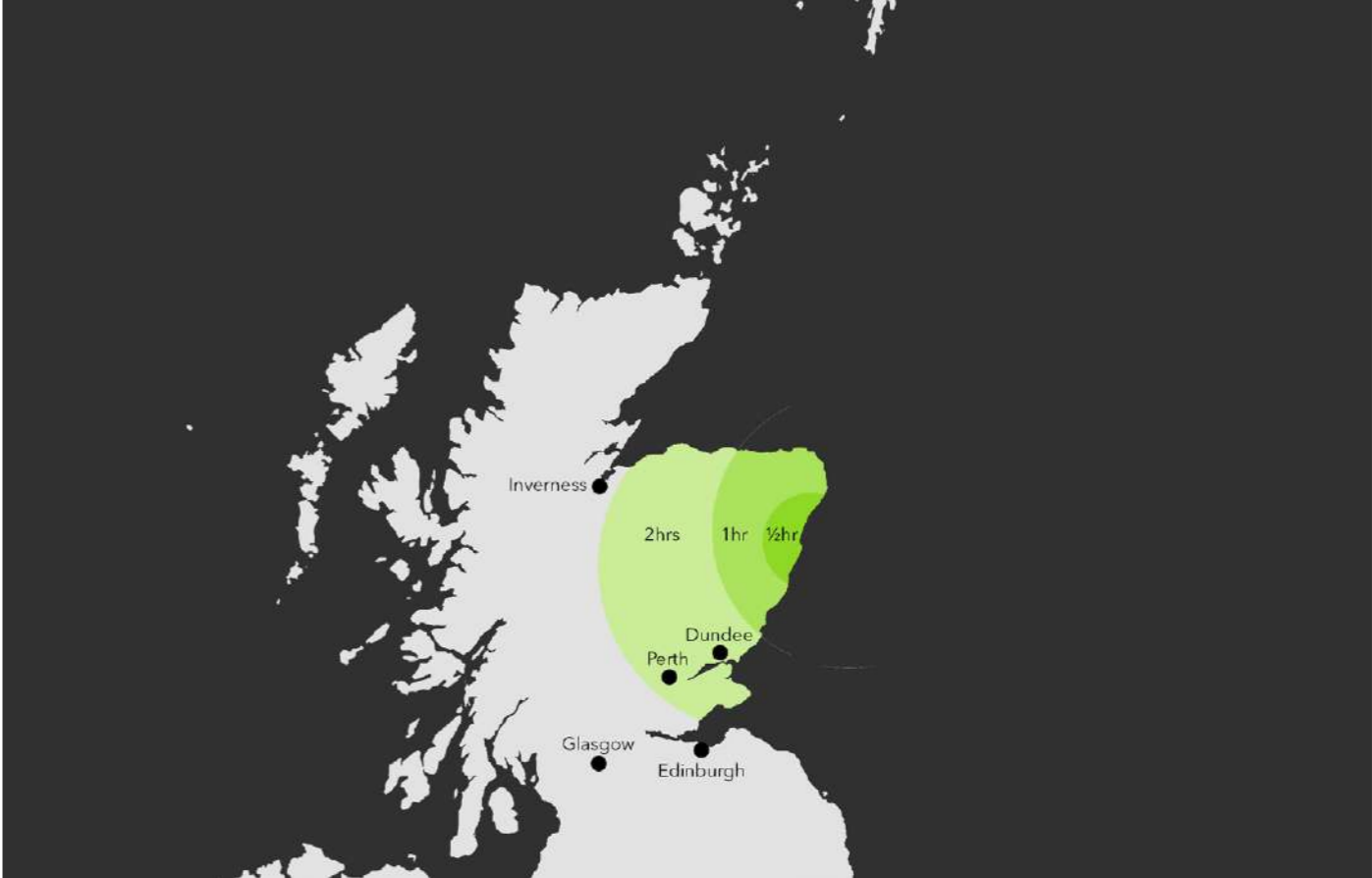
ISOCHRONE



Isocrhone Walking



Isocrhone Cyclig



Isocrhone Car

## CASE STUDIES

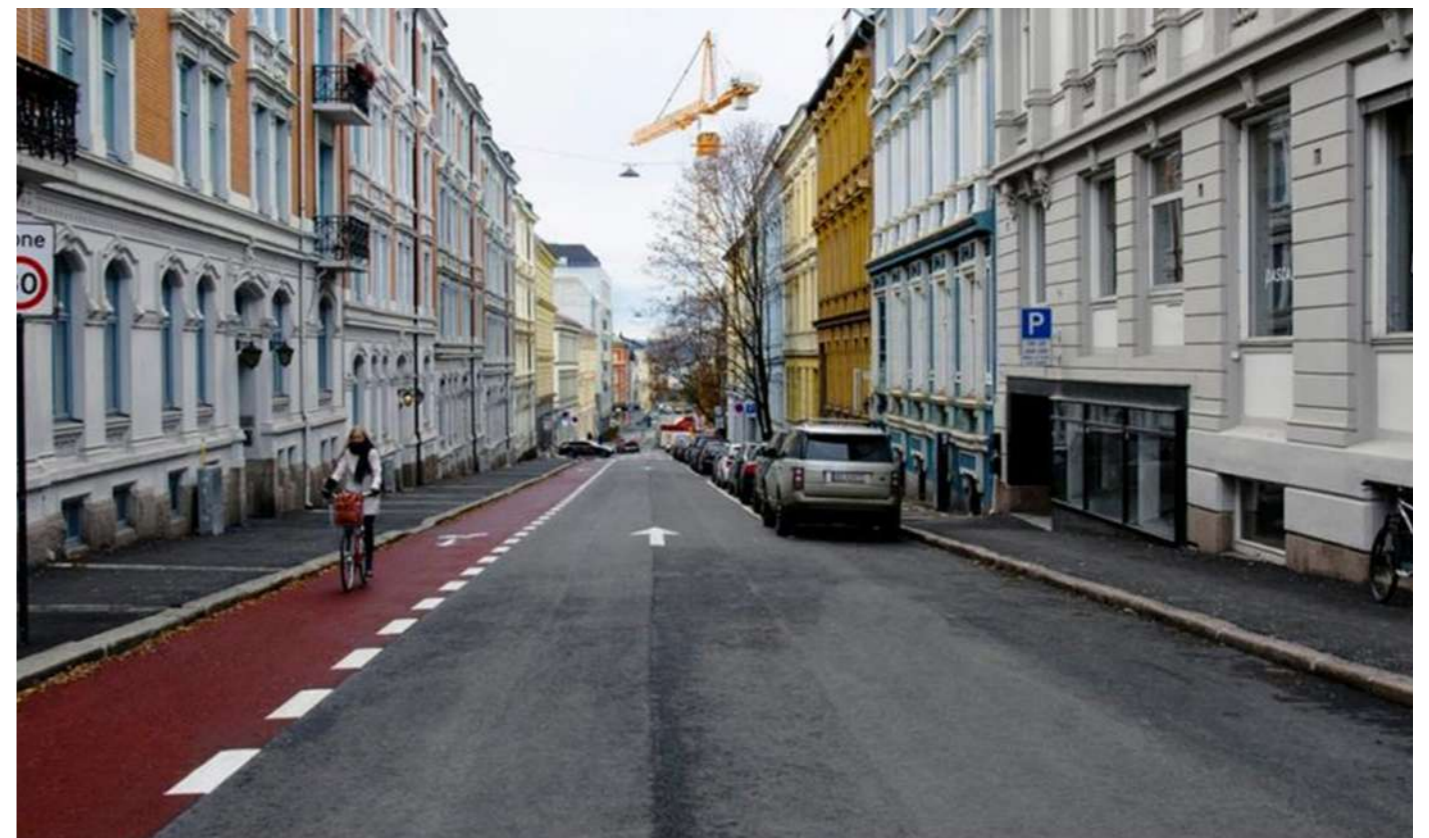
There are two examples of cities that we should look up to. London and Oslo.

Oslo has already made a lot of progresses and has achieved to considerably reduce cars in the centre and encourages biking and walking by building more facilities to improve it. New bike lanes were built, most cars parking were removed, public transport has the priority over private cars and the network is very well developed and goes everywhere.

London is planning to be a carbon free city by 2050. They have a long term vision and plan on reducing the number of car journeys by encouraging people to bike instead of driving. They are building a high quality cycle network. By 2037 all taxis and trains will be not polluting. In the end all road vehicles will need to be non polluting. They will improve all public transports network.



London Transport



Oslo Road Network

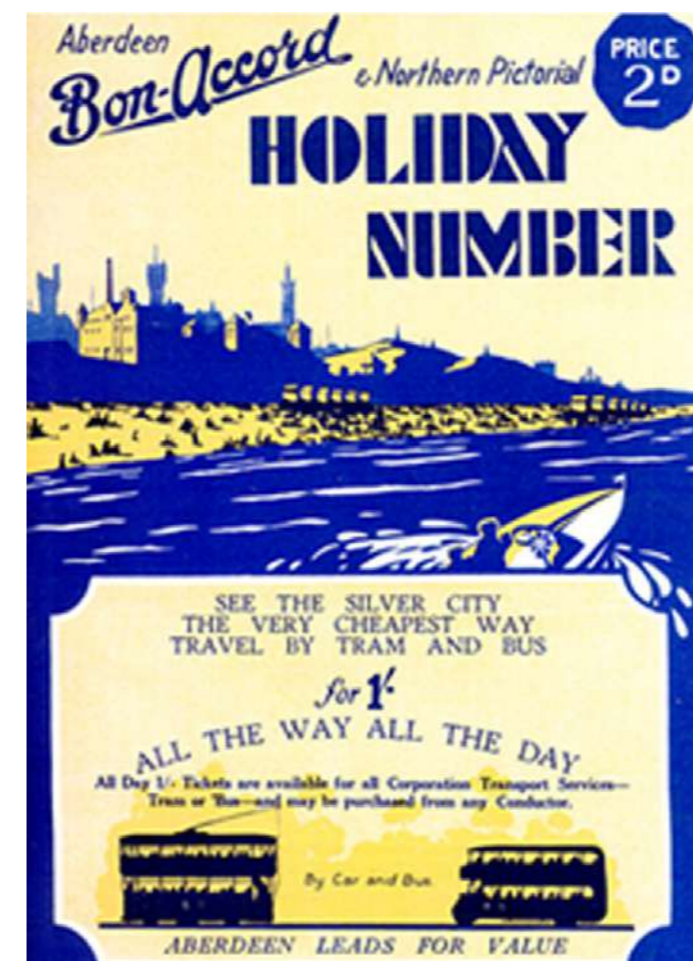
## PAST TOURISM

In the 1950s and 60s thousands pour into Aberdeen which was a popular holiday destination. They came from Glasgow and Edinburgh by mainly bus and train First class holiday resort equipped with a range of facilities. Aberdeen had lots of advertising with 2500 posters being produced and 30000 leaflets

The development of the beach front from the late 1920's led to the transformation of Aberdeen into a popularity holiday resort equipped with a range of entertainment facilities. Throughout the 1950's and 60's, thousands were attracted to Aberdeen from all parts of the UK, mainly from central Scotland by train and bus. This tourism boom was aided by the tourist board as they did a lot of promotion encouraging people to visit, including some 2,500 posters and 30,000 leaflets being produced. Holidays grew more elaborate in the 1970's and 80's as cheap flights to European destinations rose in popularity and sadly Aberdeen ceased to be a go-to spot for holidaymakers and resulted in the death of the beachfront.



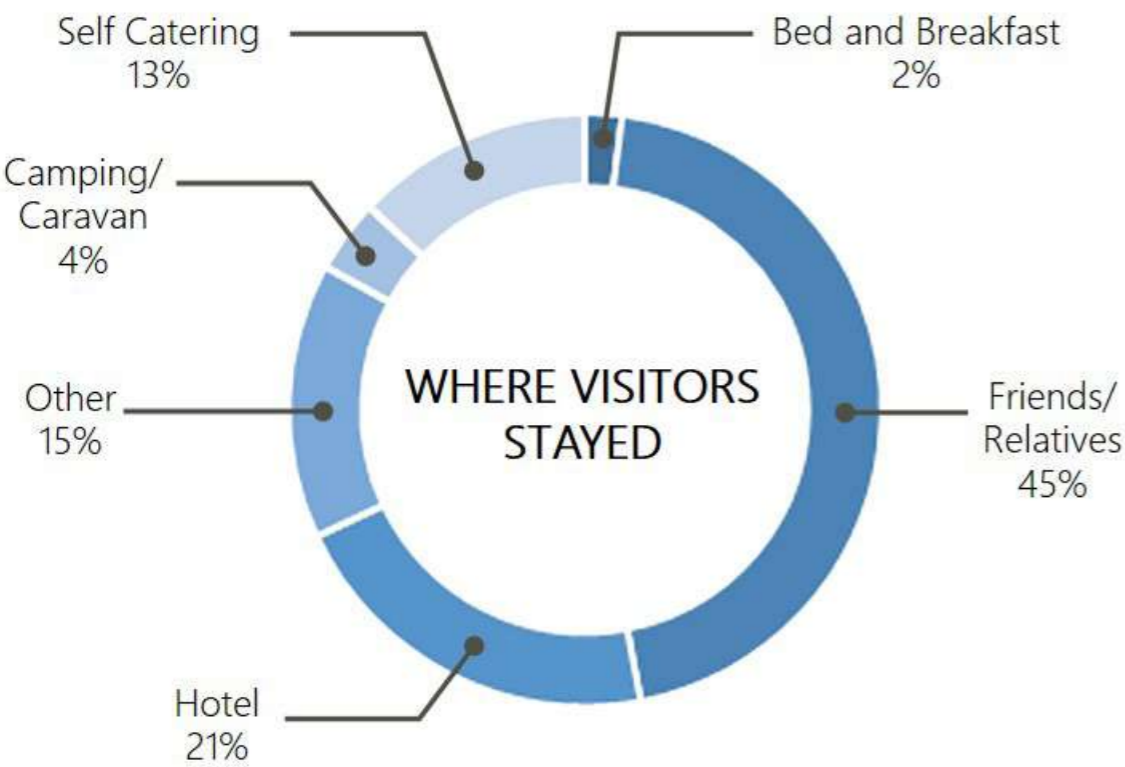
Aberdeen past years



Posters



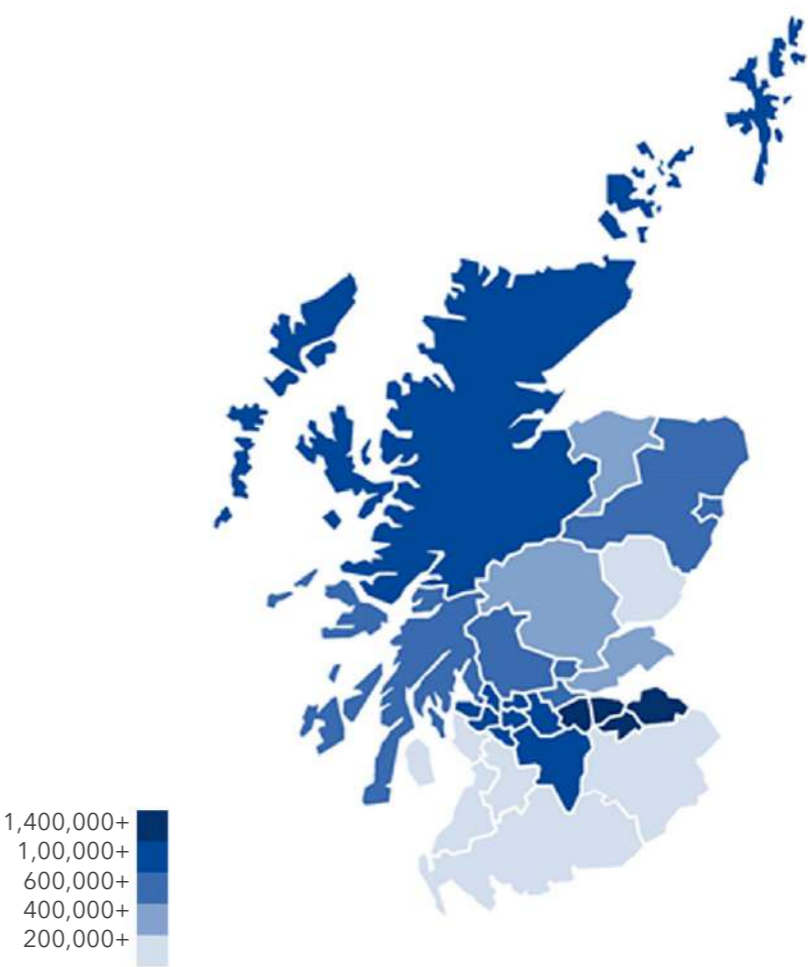
TOURISM STATISTICS



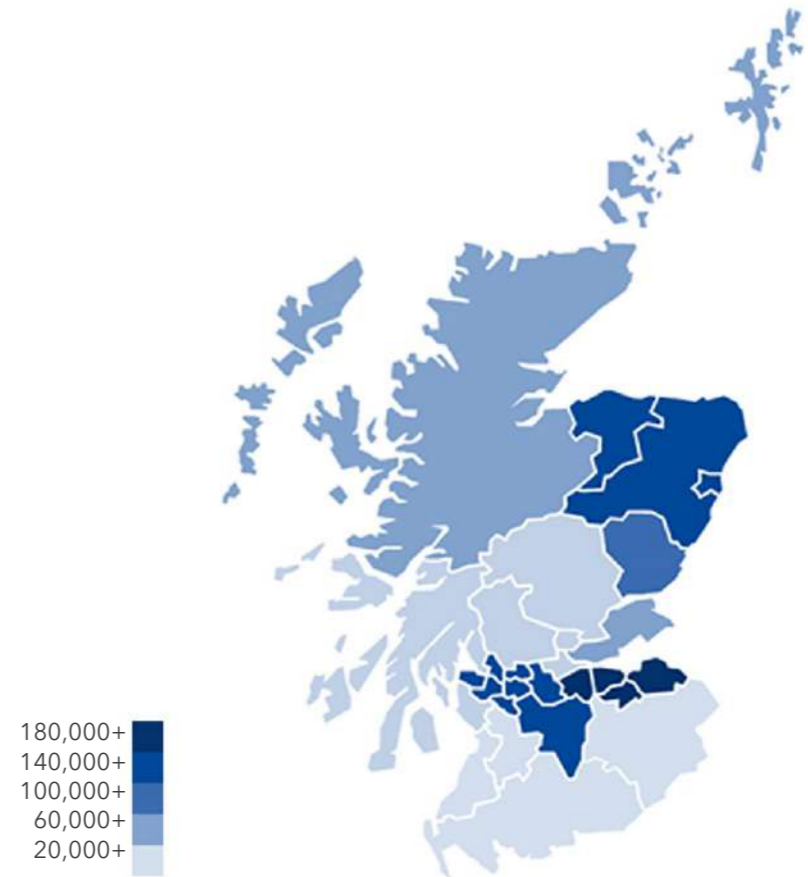
Accommodation



Reason for visiting



International Vistors by Region



International Business Vistitors by Region

**TOP ATTRACTIONS**

Top attractions in Aberdeen are mainly the green parks as shown in the figures below. There is other attractions in Aberdeen including the newly renovated Art Gallery, Maritime Museum, Codonas Amusement park and several theatres and music venues.

Duthie Park 843,000 visitors  
David Welch winter gardens 292,000 visitors  
Dunnottar Castle 101,000 visitors  
Aberdeen Maritime Museum 72,000 visitor

Duthie Park, Aden Park and Winter gardens all free attractions that are some of the most popular attractions in Aberdeen and Aberdeenshire. Aberdeen its self is famous for winning the Britain in bloom competition which they have won on several occasions. It's clear that green space seems to be popular appeal to local people and visitors which the beach front once have so can they now capitalise on these huge visitor numbers.



Dunnottar Castle

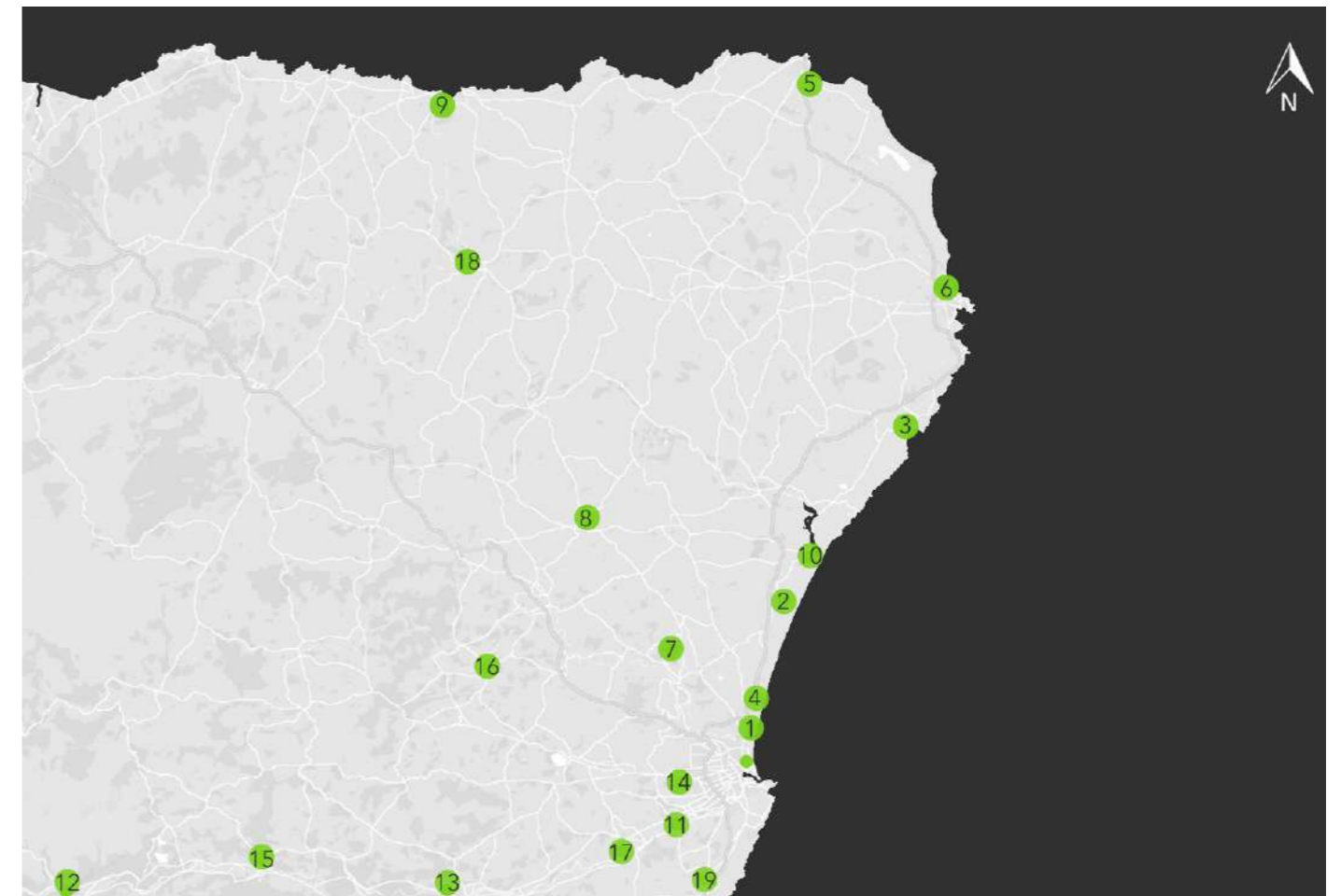


Duthie Park

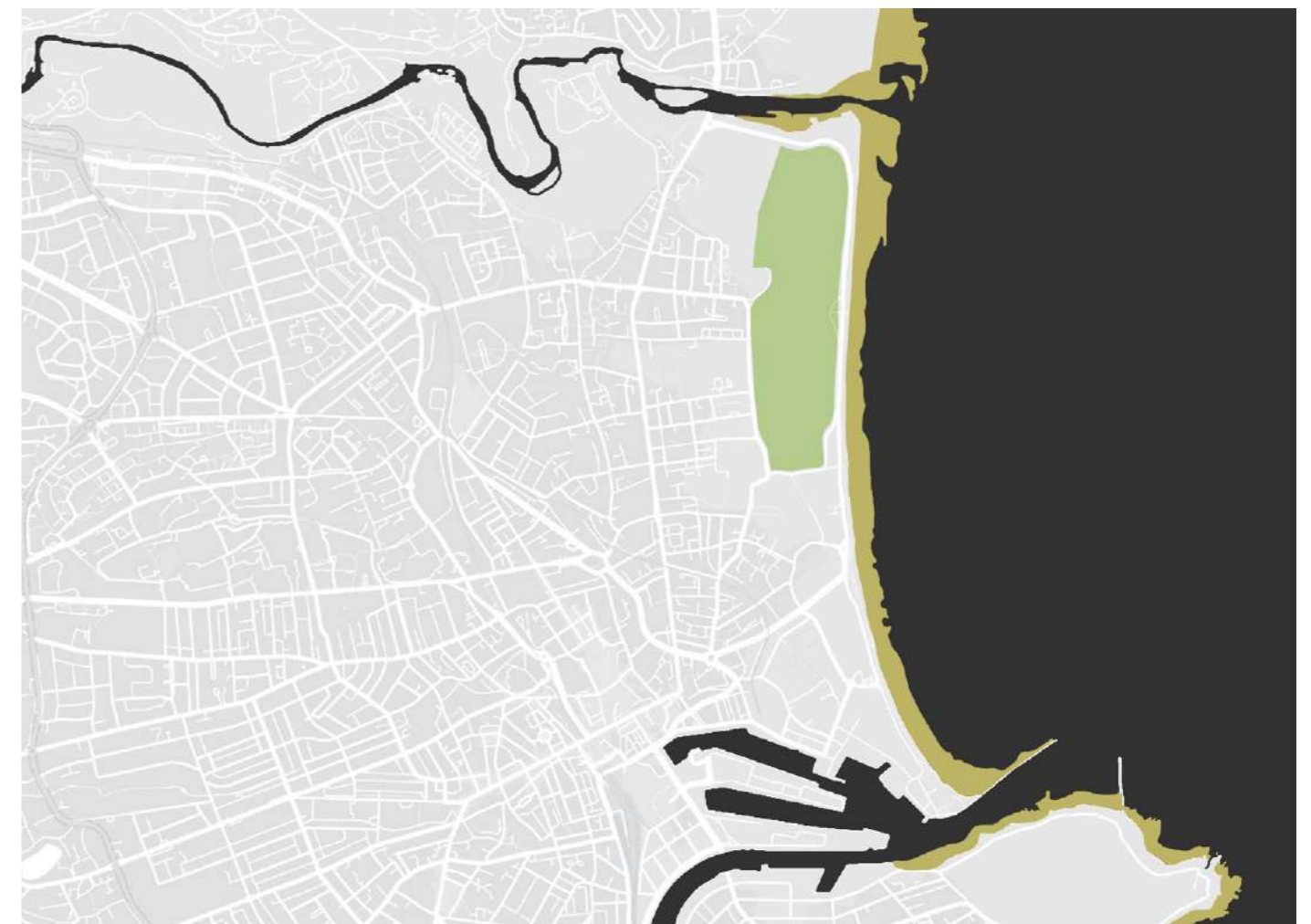
## GOLF

Aberdeenshire's range of golf courses are highly regarded by both professional and non-professional golfers, giving the city a strong brand position in this sector. Golf visitors to the city and shire are often loyal, repeating their visit and recommending Aberdeen as a destination to play the fine array of courses. They are also frequently high-value, opting for high-end accommodation and dining.

The economic value of golf in the area was £15million in 2016 and the Golf Tourism Alliance want to boost this figure to £30million by 2020. Contributing to the strong value of golf in Aberdeen is the recognised competitions the city has hosted; The Scottish Open, The Walker Cup and The Amateur Championship to name a few. To further enhance golfing culture and tourism, the city needs to take advantage of its courses and capitalise on the large visitor numbers these reputable competitions bring, primarily by making golfing events a more common occurrence.



Popular Golf Courses



One of the oldest golf courses in Scotland

CASTLES

With over 300 castles, stately mansions and ruins scattered across the landscape, Aberdeen and shire is known as Scotland’s castle country. There are more castles per hectare here than anywhere else in the UK. From this stemmed the creation of a castle trail, the only one of its kind in Scotland, bringing together nineteen rich and unique examples of castellated architecture. The most famous of these being Balmoral, the summer residence of the Royal Family.

The numerous castles provide fantastic opportunities to tap into the growing cruise ship sector with the new Nigg Bay harbour. All castles are easily accessible and have the potential to create day trips when the cruise ships dock or for much longer visits make use of the trail, which take six days to complete. Furthermore, this could be given a brand to advertise and promote Aberdeen’s abundance of castles and their heritage.

- 1. Dunnottar Castle - 28mins
- 2. Crathes Castle - 33mins
- 3. Drum Castle - 28mins
- 4. Castle Fraser - 36mins
- 5. Tolquhon Castle - 26mins
- 6. Haddo House - 34mins
- 7. Fyvie Castle - 41mins
- 8. Delgatie Castle - 51mins
- 9. Kinnaird Head - 56mins
- 10. Duff House - 1hr 4mins
- 11. Huntly Castle - 58mins
- 12. Spynie Palace - 1hr 34mins
- 13. Balvenie Castle - 1hr 12mins
- 14. Leith Hall - 53mins
- 15. Kildrummy Castle- 1hr
- 16. Corgarff Castle - 1hr 26mins
- 17. Braemar Castle - 1hr 27mins
- 18. Balmoral Castle - 1hr 19mins
- 19. Craigievar Castle - 49mins



Map of Castles

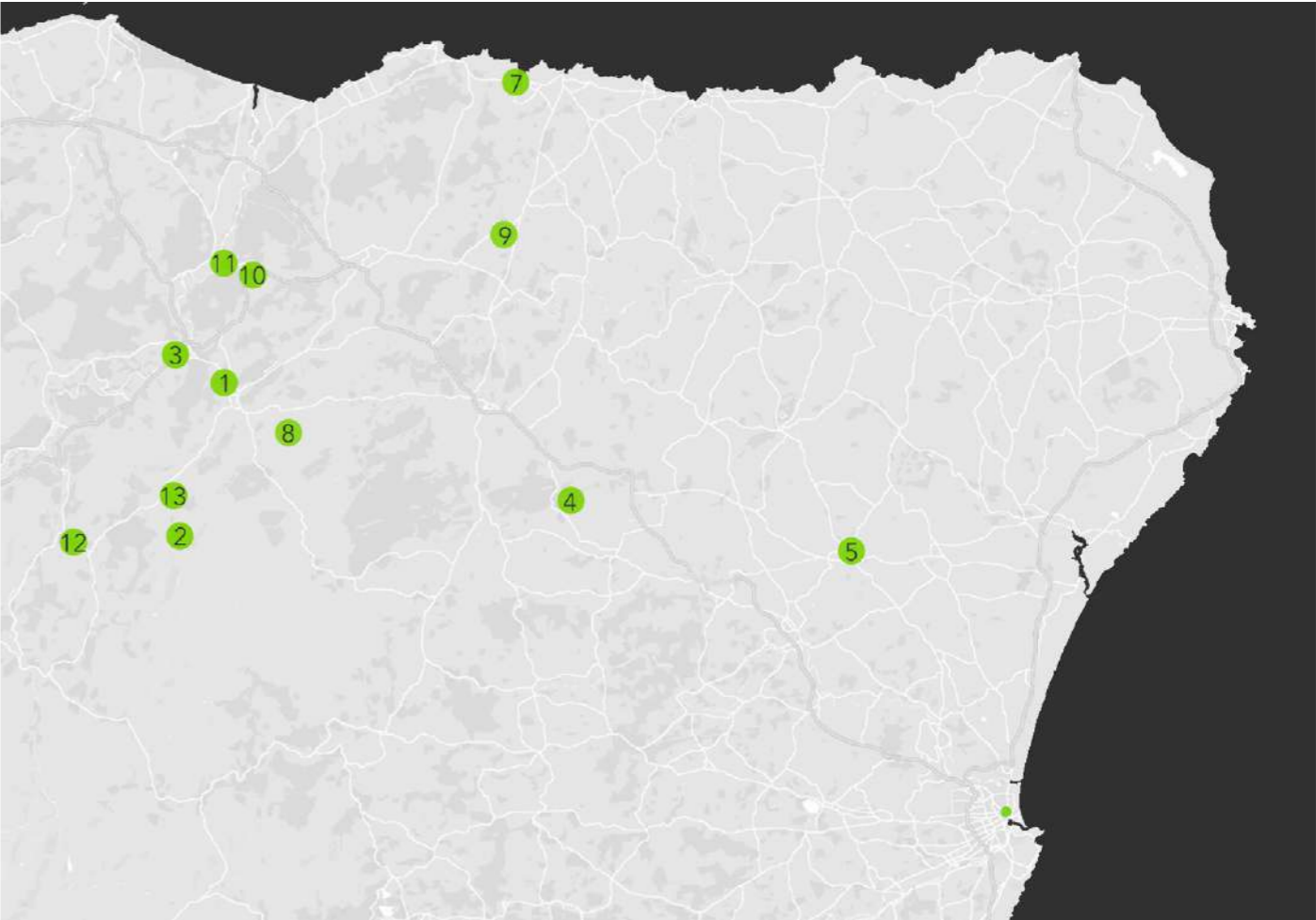


Castle Trail

WHISKY

Looking at different whiskey visitors centre that people come to the north east to see. Macallen’s new distillery and visitor experience costing 140 million designed by Richard rogers

- 1. Glenfiddich 1 hour 17 mins
- 2. Glenlivet 1 hour 39mins
- 3. MacCallen 1 hour 29 mins
- 4. Ardmore 53 mins
- 5. Glen Garioch 33 mins
- 6. Royal Lochnagar 1 hour 23 mins
- 7. Glenglassaugh 1 hour 23 mins
- 8. Mortlach 1 hour 10 mins
- 9. Knockdhu 1 hour 11 mins
- 10. Balvenie 1 hour 20mins
- 11. Auchroisk 1 hour 19 mins



Map of Distilleries



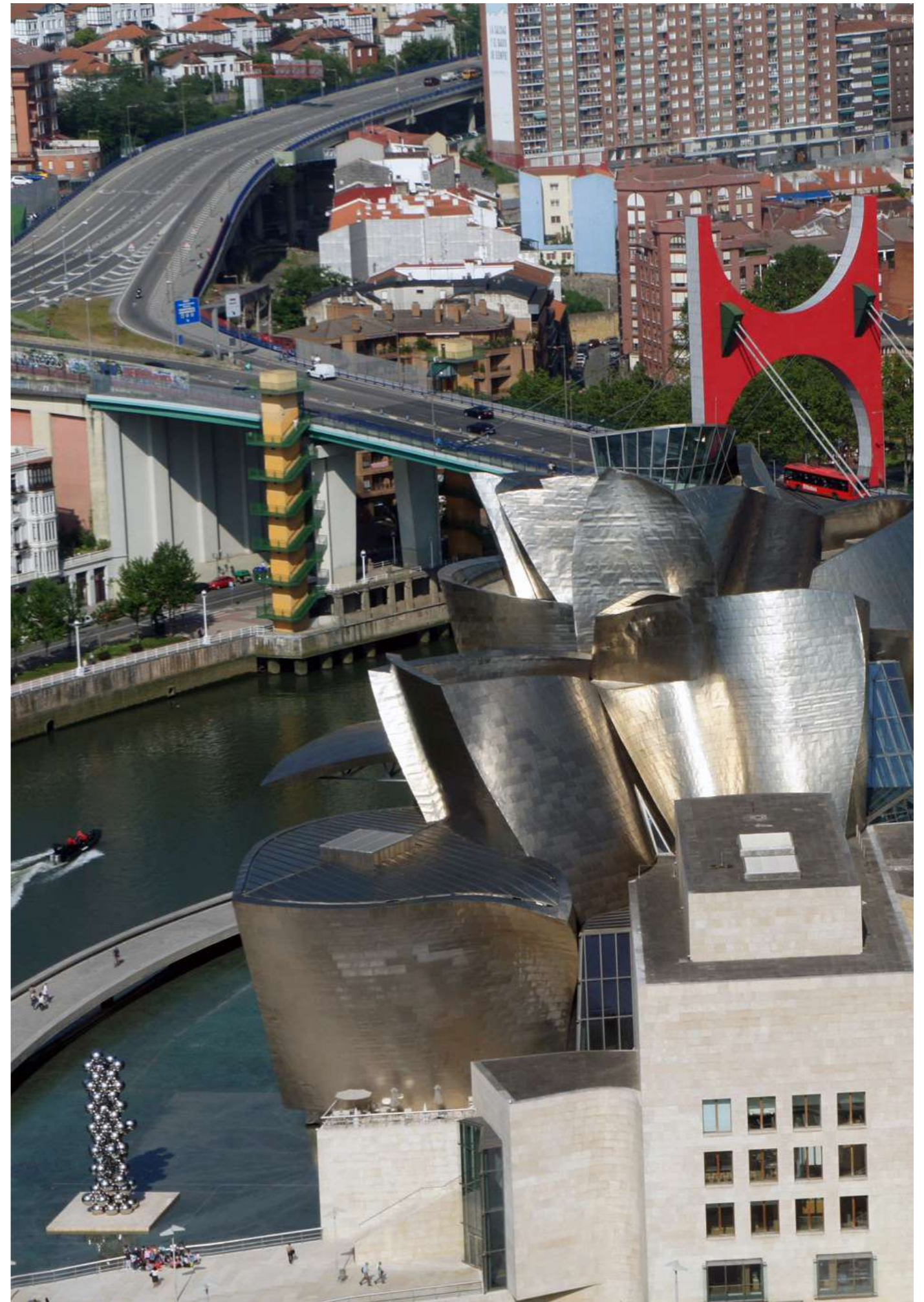
Whisky Trail

## CASE STUDIES

### BILBAO

Annual visitor numbers to the city increased from 100,000 before the museum opened to 700,000 in 2011. Although many initially thought it represented a waste of resources, the Guggenheim is thought to have contributed more than €2.4bn (£2bn) to the Basque province's GDP since October 1997.

The Frank Gehry designed museum is the main attraction in Bilbao's cultural crown, a folded, titanium-clad ship nestling low in the water, next to the La Salve road bridge, on an attractive riverfront walkway. Since it opened in 1997, it has captured local and international imaginations. For the traveling public, it is a spectacular and Instagramable contemporary art museum. For politicians, city planners, architects, and museum directors, it represents the ability of cultural institutions to regenerate run-down regions.



Bilbao

An aerial photograph of a coastline, likely Aberdeen, showing white foam from waves crashing against a dark blue, rocky shore. The coastline is jagged and irregular, with several inlets and peninsulas. The water is a deep, dark blue, while the foam is a bright, almost white color. The overall composition is vertical, with the coastline running from the top left towards the bottom right.

## ABERDEEN'S FUTURE

WE BELIEVE WE CAN ASPIRE TO FABRICATE INNOVATIVE  
TECHNOLOGIES FOR AN EFFICIENT FUTURE

PROJECTIONS | GLOBAL MEAN SEA LEVEL RISE

Abroad expert assessment of future sea level rise resulted in higher estimates than those from the process-based models reviewed in the AR5. The best expert estimates for sea level rise during the 21st century were 0.4–0.6 m for the low forcing scenario (RCP2.6) and 0.7–1.2 m for the high forcing scenario (RCP8.5) (1st map). However, substantially higher values of sea level rise cannot be ruled out. Several recent model-based studies, expert assessments and national assessments have suggested an upper bound for 21st century global mean sea level rise in the range of 1.5–2.5 m.

Sea level rise will continue to rise far beyond 2100. A recent effort to synthesise process-based model projections using a physically-based emulator suggests global sea level rise at 2300 of 0.8–1.4 m for RCP2.6, 1.3–2.3 m for RCP4.5, 1.7–3.2 m for RCP6.0 (2nd map) and 3.4–6.8 m for RCP8.5 (3rd map). However, another recent modelling study suggests that ice loss from Antarctica could occur more rapidly than previously thought and lead to sea level rise of more than 15 m by 2500 under the RCP8.5 emissions scenario. On a multi-millennial time scale, projections based on process-based models suggest a quasi-linear GMSL rise of 1–3 m per degree of global warming for sustained warming over a period of 2 000 years. Significantly higher estimates for GMSL rise on multi-millennial time scales, of up to 50 m over 10 000 years for a high emissions scenario, have been derived from the geological record.

RCP8.5

A high emission pathway for which \*radiative forcing reaches more than 8.5 Wm<sup>-2</sup> by 2100.

RCP6.0

Intermediate stabilisation pathway in which \*radiative forcing is stabilised at approximately 6.0 Wm<sup>-2</sup> after 2100.

RCP4.5

Intermediate stabilisation pathway in which \*radiative forcing is stabilised at approximately 4.5 Wm<sup>-2</sup> after 2100.

RCP2.6

A pathway where \*radiative forcing peaks at approximately 3 Wm<sup>-2</sup> before 2030 and then declines to 2.6 Wm<sup>-2</sup> by 2100.

\*Changes in the balance of incoming and outgoing radiation to the atmosphere.



1 metre



3 metres



7 metres

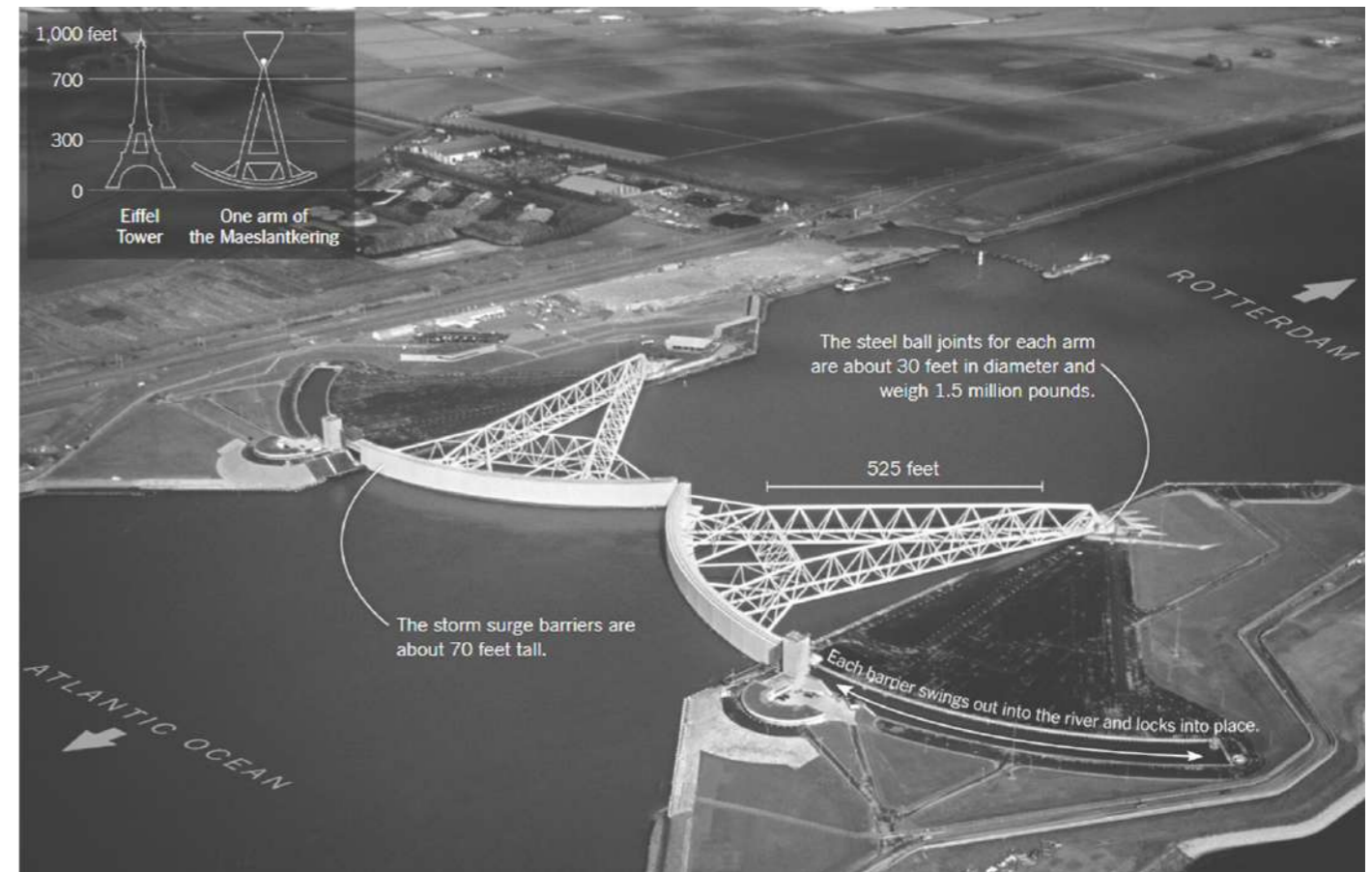
## SOLUTIONS TO PREVENT FLOODS

### ROTTERDAM'S FLOOD GATES

In closing the gate, the arms float out onto the canal, meet and lock, the tubes filling with water and sinking onto a concrete bed, making an impenetrable steel wall against the North Sea. The process takes 2.5 hours. Pressure from the sea is then transferred from the wall to the largest ball joints in the world, embedded in the banks on either side of the river. However, it can only stay closed for about 12 hours.

### THAMES'S FLOOD BARRIERS

The barrier, made up of 10 steel gates, reaches 520m across the river. When opened, the gates lie flat on the river floor and close by being rotated upwards until they block the river. The four main gates span 61.5m. The barrier is closed just after low tide to create an empty «reservoir» for the river flow to fill up. It takes 75-90 minutes to close it, starting with the gates on the outside until the middle gates are shut.



Rotterdam's Flood Gates



Thames's Flood Barriers



Projections that show Aberdeen in 300 years with 7 metre sea rise.

## ARCTIC ICE CAP MELTING OPENING NEW SHIPPING ROUTES

The Arctic ice cap is shrinking and thinning in summer, opening shipping lanes and access to valuable natural resources.

### NORTHWEST PASSAGE

It would be the last of the three main routes to thaw, partly because it passes through straits that get blocked more easily by ice. But some Canadian officials estimate it will open within 20 years.

### ARCTIC BRIDGE

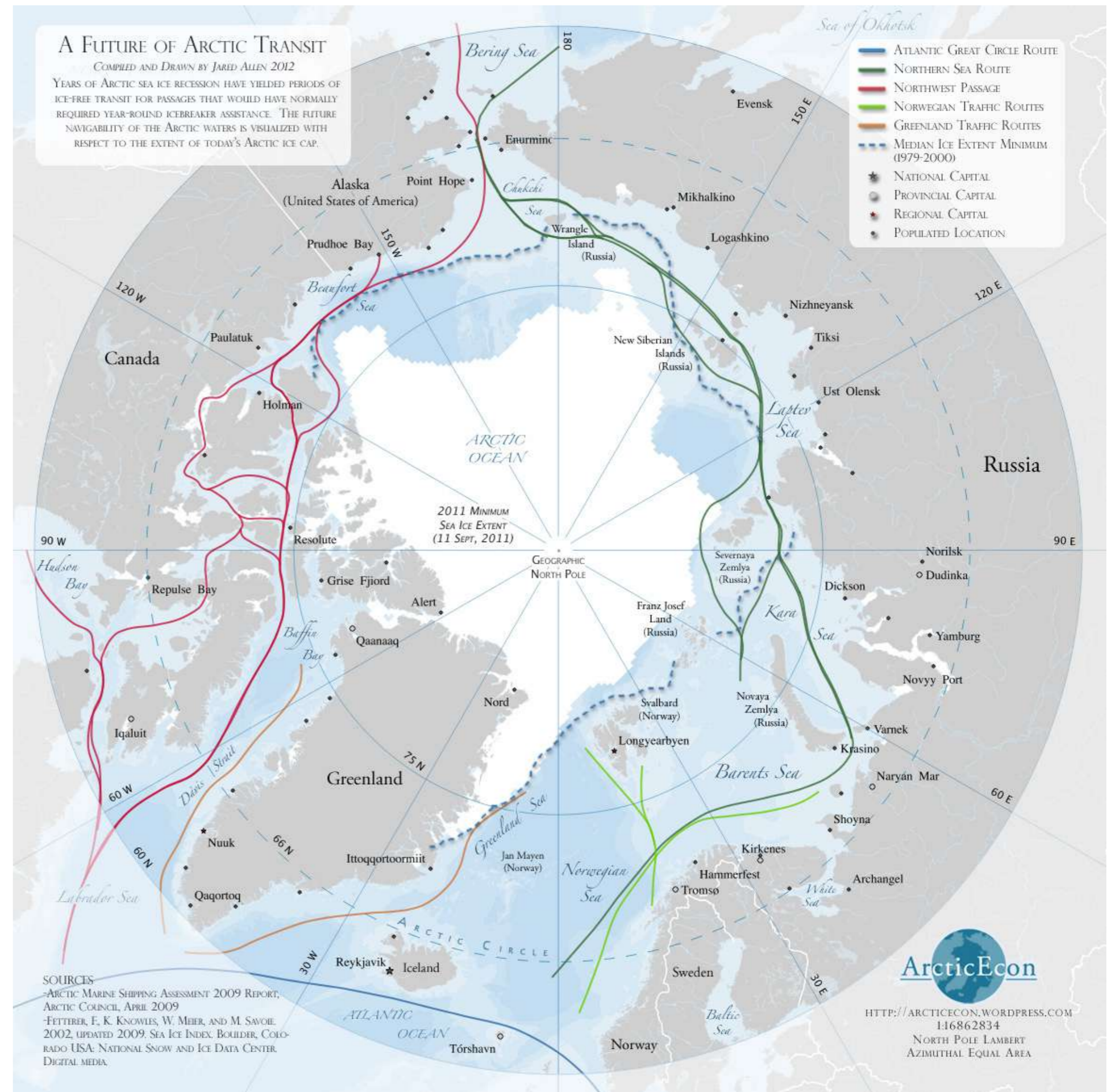
The route connecting Murmansk and Churchill is already open four months a year. But Hudson Bay is frozen over the remainder of the year, making it an impractical route. A warming climate would make it usable for longer periods.

### NORTHERN SEA ROUTE

During the Soviet era, millions of tons of cargo passed along this route with the help of nuclear-powered icebreakers. Transport plunged after the Soviet Union collapsed. If ice pulls back from the coast as many scientists project, ships moving between northern Europe and Asia could cut transit time by 10 to 15 days.

### NATURAL RESOURCES

Perhaps the biggest Arctic prize is oil and natural gas. The melting of the ice cap will allow energy companies to reach numerous petroleum deposits believed to exist under the Arctic Seabed.



# PASSIVE HOUSE

## THERMAL INSULATION

All opaque building components of the exterior envelope of the house must be very well-insulated. For most cool-temperate climates, this means a heat transfer coefficient (U-value) of 0.15 W/(m²K) at the most, i.e. a maximum of 0.15 watts per degree of temperature difference and per square metre of exterior surface are lost.

## WINDOWS

The window frames must be well insulated and fitted with low-e glazings filled with argon or krypton to prevent heat transfer. For most cool-temperate climates, this means a U-value of 0.80 W/(m²K) or less, with g-values around 50% (g-value= total solar transmittance, proportion of the solar energy available for the room).

## VENTILATION HEAT RECOVERY

Efficient heat recovery ventilation is key, allowing for a good indoor air quality and saving energy. In Passive House, at least 75% of the heat from the exhaust air is transferred to the fresh air again by means of a heat exchanger.

## AIRTIGHTNESS OF THE BUILDING

Uncontrolled leakage through gaps must be smaller than 0.6 of the total house volume per hour during a pressure test at 50 Pascal (both pressurised and depressurised).

# MEETING FUTURE REQUIREMENTS

## ADAPTATION TO NEW FORMS OF ENERGY

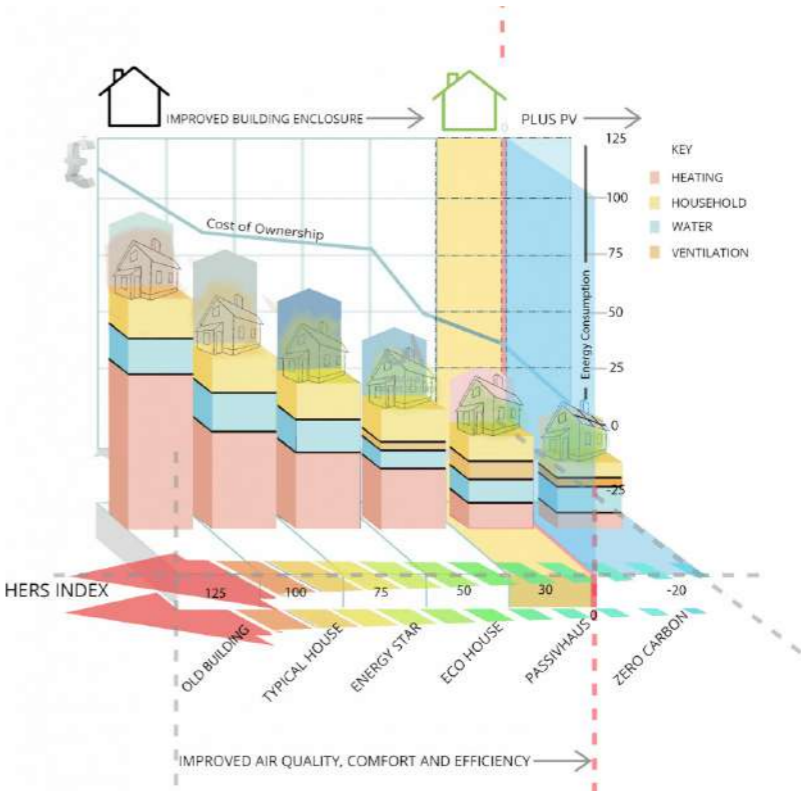
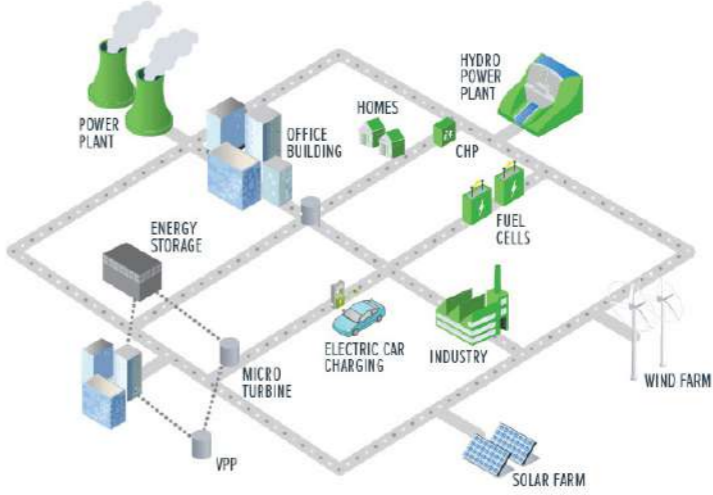
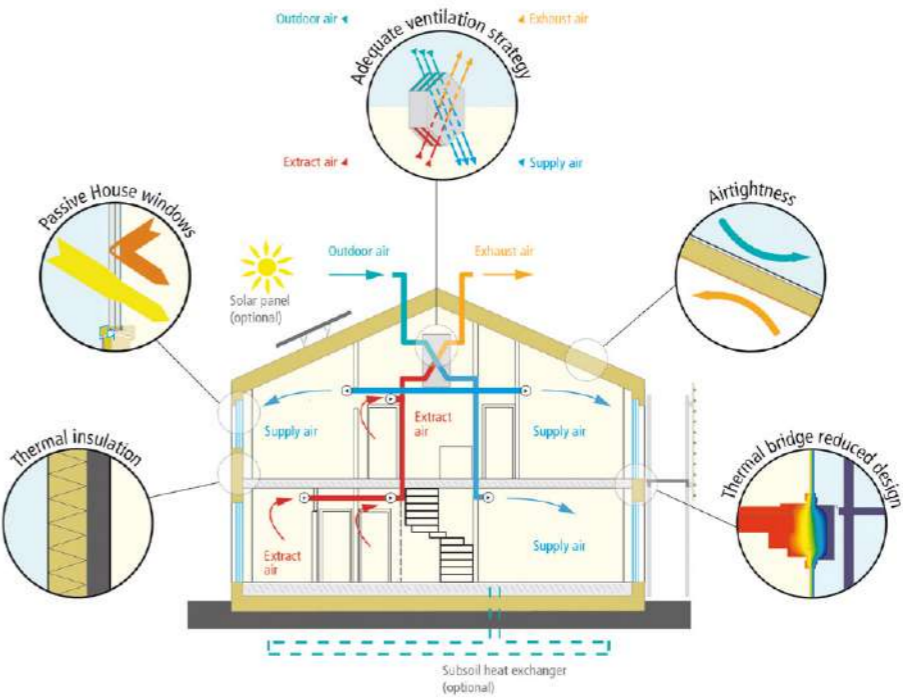
Buildings constructed today will be still in use when fossil fuels will be probably no longer available. Buildings should be ready to be retrofitted for other forms of energy supply. The only energy source that will be available in the next 50 years is the sun!

## INTEGRATION OF BUILDINGS IN THE ENERGY NETWORKS

Buildings will pass from being consumer to being producer of energy. The challenge for the future is the integration of centralised and de-centralised sources of energy into a "smart" system, balancing demand and supply. Smart grids: power station + buildings + cars.

## REDUCING DEPLETION OF RESOURCES

Consumption of fertile land, water and raw materials. Consideration of Life Cycle and related impacts. Use of recycled/recyclable materials. Design of secondary use and design for disassembly.



## CASE STUDIES

### E3 HOUSE IN BERGAMO COLOGNOLA, ITALY ATELIER2-GALLOTTI E IMPERADORI ASSOCIATI

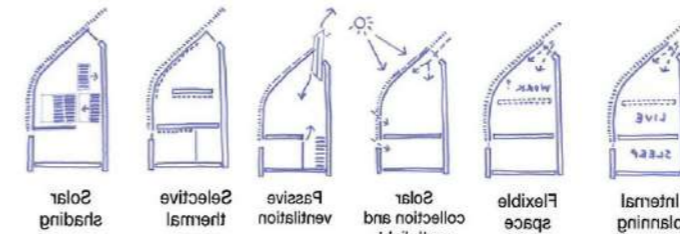
- Timber louvers to reduce the risk of summer overheating
- North-South cross ventilation
- Exploitation of natural light
- Lightweight steel structure
- 100 % recycled insulation panels (polyester)
- Conservatories for passive solar gain
- Solar panels for water heating
- Energy-efficient condensation boiler
- Radiant floor panels for winter heating
- Mechanical ventilation with heat recovery

### THE LIGHTHOUSE A NET ZERO CARBON HOME

- Lightweight envelope, very high levels of insulation
- Sloping roof is designed to optimise free energy production
- Openings are relatively small to avoid overheating (light enters from North-facing skylights)
- Artificial thermal mass is incorporated in lining boards
- Ventilation can be mechanical (with heat recovery) or natural (with wind funnel)



E3 House



The Lighthouse



## CASE STUDIES

### GREEN LIGHTHOUSE COPENHAGEN

- 75% of the energy reductions achieved were a direct consequence of architectural design, not fancy technology
- Wall:  $U = 0,095 \text{ W/m}^2\text{K}$
- Roof:  $U = 0,085 \text{ W/m}^2\text{K}$
- Roof windows:  $U = 1,0 \text{ W/m}^2\text{K}$
- EPh < 30 kWh/m<sup>2</sup>a

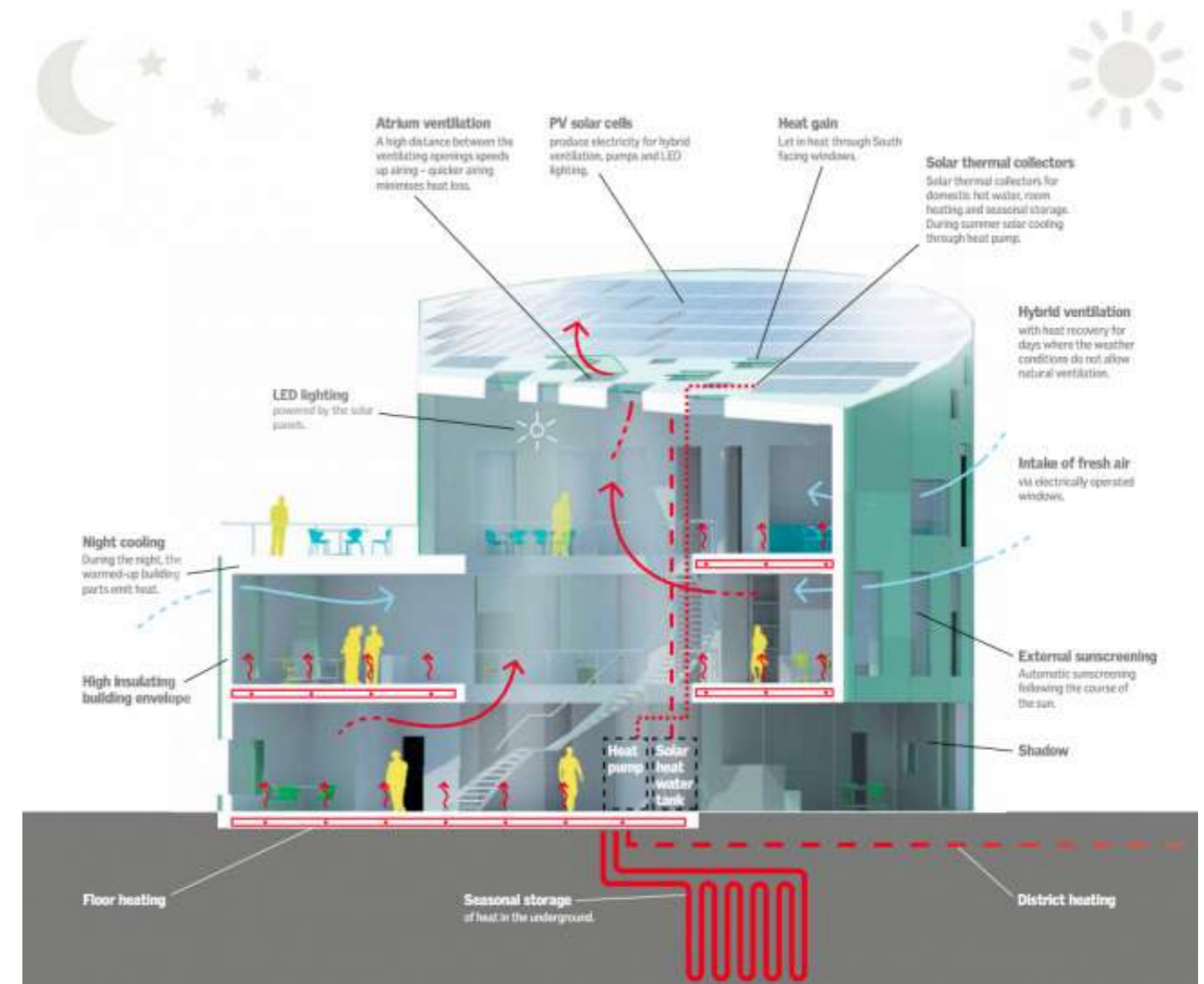
Green Lighthouse is Denmark's first public carbon-neutral building. The building has been built in less than a year in a close public/private partnership.

It is a round, sculptural building with high ceilings and an open, spacious floorplan. It is designed in a way that reduces energy consumption by 70% utilising renewable energy, natural ventilation and light – and with a highly efficient climate envelope.

The sun is the building's main energy source, providing passive solar gain, hot water and electricity.

Efficient windows minimise the heat loss while maximising passive solar gain. Green Lighthouse's angled roof plays an active role in the building's energy profile. It acts as a power plant, capturing the sun's energy using both solar panels and solar cells.

As sustainable as it is healthy, the two-storey public building relies on district heating, solar cells, solar heating and cooling, seasonal storage and innovative architecture to create a gorgeous, CO<sub>2</sub>-neutral building.



Green Lighthouse

SUSTAINABLE SOLUTIONS

Trams

- S

- Traffic congestion solution
  - One vehicle replaces about 40 cars
  - Very durable, with some being in continuous revenue service for more than fifty years
  - A sustainable urban development
  - Built on specific right off way route (so they don't share the same space as cars and other vehicles)
- W

- Time consuming pre investment procedures
  - Can expose neighbouring populations to moderate levels of low-frequency noise.
- O

- Trams can be tourist attractions in ways buses usually aren't
- T

- Tracks can be hazardous for cyclists

Wind Turbines

- S

- Good wind conditions
  - High interest among investors
  - Unlimited resources available
- W

- Impact on the landscape
  - High investment costs
  - Potential threat to fauna
  - Conflicts with local communities and ecological organisations
- O

- Technological progress increasing the efficiency of wind power installations
  - Development of small, domestic wind turbine
- T

- Reduction in State support for wind power
  - Environmental communities opposition
  - Difficulties connecting to the power grid

Hydrogen buses

- S

- Locally available
- W

- Small energetic potential
  - Possibility of conflicts due to location in protected areas
  - Time consuming pre investment procedures
- O

- Development of technologies less harmful for river ecosystems
- T

- Increase in ecological and legal restrictions



Tram



Wind Turbines



Hydrogen buses

# THE GLOBAL GOALS

The 2030 Agenda for Sustainable Development is a historic global agreement to eradicate extreme poverty, fight inequality and injustice and leave no one behind. Agreed by world leaders at the UN in 2015, the 17 Sustainable Development Goals (SDGs) succeed the Millennium Development Goals (MDGs). The SDGs are universal with all signatories expected to contribute to them internationally and deliver them domestically.



How **green offices** can provide the foundations towards meeting several Sustainable Development Goals





# ENVIRONMENT AND CLIMATE

WE BELIEVE WE CAN USE THE UNIQUE  
ENVIRONMENT TO OUR ENVIRONMENT

WILDLIFE AND VEGETATION

DOLPHINS

There are around 200 dolphins in the North Sea off the North coast of Scotland. They migrate between Tayside and the Moray Firth and can often be seen around Aberdeen.

It is estimated they bring in around £4 million to local authorities through tourism every year. This leads to the introduction of education centres such as plans for the new Greyhope Bay centre, at the Torry Battery, a popular spot to see dolphins in the city. The dolphins prefer to feed at the mouth of the River Dee where a mix of fresh and salt water fish are available. The sign of dolphins in Aberdeen’s harbour helps to suggest that the ecosystem is healthy which is positive news for the other wildlife that live and make use of Aberdeen’s coastline.

SEALS

Harbour and Grey Seals are also found in the Aberdeen area, appearing seasonally at the river Dee and Don estuaries in the winter and early-spring. They have been spotted feeding on salmonids and flatfish along in the area as well as other marine prey.

SEA DUCKS

Common and Velvet Scoters can also be found feeding in the North Sea, off the Aberdeen coast. They live in peaty lochs inland and use the sea to feed, especially during the winter months. They are primarily spotted together bobbing offshore or flying along the coast, often in large numbers despite the fact that they are actually on the red species list with many winter populations vulnerable to oil spills.

GULLS

Gulls are extremely common all over the city and along the beach front, often harrassing members of the public. They feed on the fish that the North Sea has to offer while also benefitting from humanity’s laziness with litter. Aberdeen’s community is struggling with the increasingly difficult gull population that continue to cause problems for the residents of the city.

FISH & SHELLFISH

Huge variety of fish live in North Sea and most are commercially fished.

MARRAM GRASS

Dense, spiky tufts are often a familiar sight on the country’s windswept coast. The matted roots help to stabilize sand dunes, allowing them to grow up and become colonized by other species

GORSE

Gorse is good at adapting to its environment with sharp spikes that protect it from hungry animals. It’s bright yellow flowers have a coconut-like fragrance and attract pollinators. It multiplies through the seeds popping out when they are ripe. Invertebrates take advantage of the plant as it is in flower for long periods of time, providing nectar from early spring to early winter. Large numbers of scarce invertebrates depend on it.

WILD FLOWERS

A number of different wild flowers can be found along Aberdeen’s beachfront, many of which bloom during the spring and summer. They aren’t present in great numbers but can be found scattered all over, often growing with the marram grass, providing small patches of colour.



Gulls



Sellfish



Dolphins



Seals



Sea ducks



Marram grass



Wild flowers

### EASTERN SCOTLAND'S CLIMATE

The weather in UK and particularly in Scotland is very changeable as the country, which is an island, is under the influence of different air masses. Moist maritime air flows in from the west, bringing milder, wetter weather. The cold Arctic air comes from the north, while warm, tropical winds come in from the south. The air coming from continental Europe tends to bring dry, hot conditions in summer but cold, dry weather during the winter. This creates variable weather that changes from day to day.

Mean temperature: 8°C (average in the UK : 11°C)

The significant variation in temperature arise from the combined effects of:

- the proximity of the coast
- the topography
- in a lesser way, the urban development

Coldest month: January

Warmest month: July

### SUNSHINE

May and June are the sunniest months whereas December is the duller. The industrial pollution and smoke haze can reduce sunshine amounts but the decline in heavy industry has resulted in an increase in sunshine duration, particularly in the winter. Eastern Scotland is the sunniest place of Scotland.

### RAINFALL

Rainfalls are associated with Atlantic depressions. The Atlantic Lows are more vigorous in autumn and winter and bring most of the rains that falls in these seasons. Altitude affects the rainfall distribution (a map of average rainfall is similar to a topographic map). The western winds bring the rain. Periods of prolonged rainfalls can lead to widespread flooding, especially in winter and early springs (because soils are saturated with water already). The wettest months are October and November.

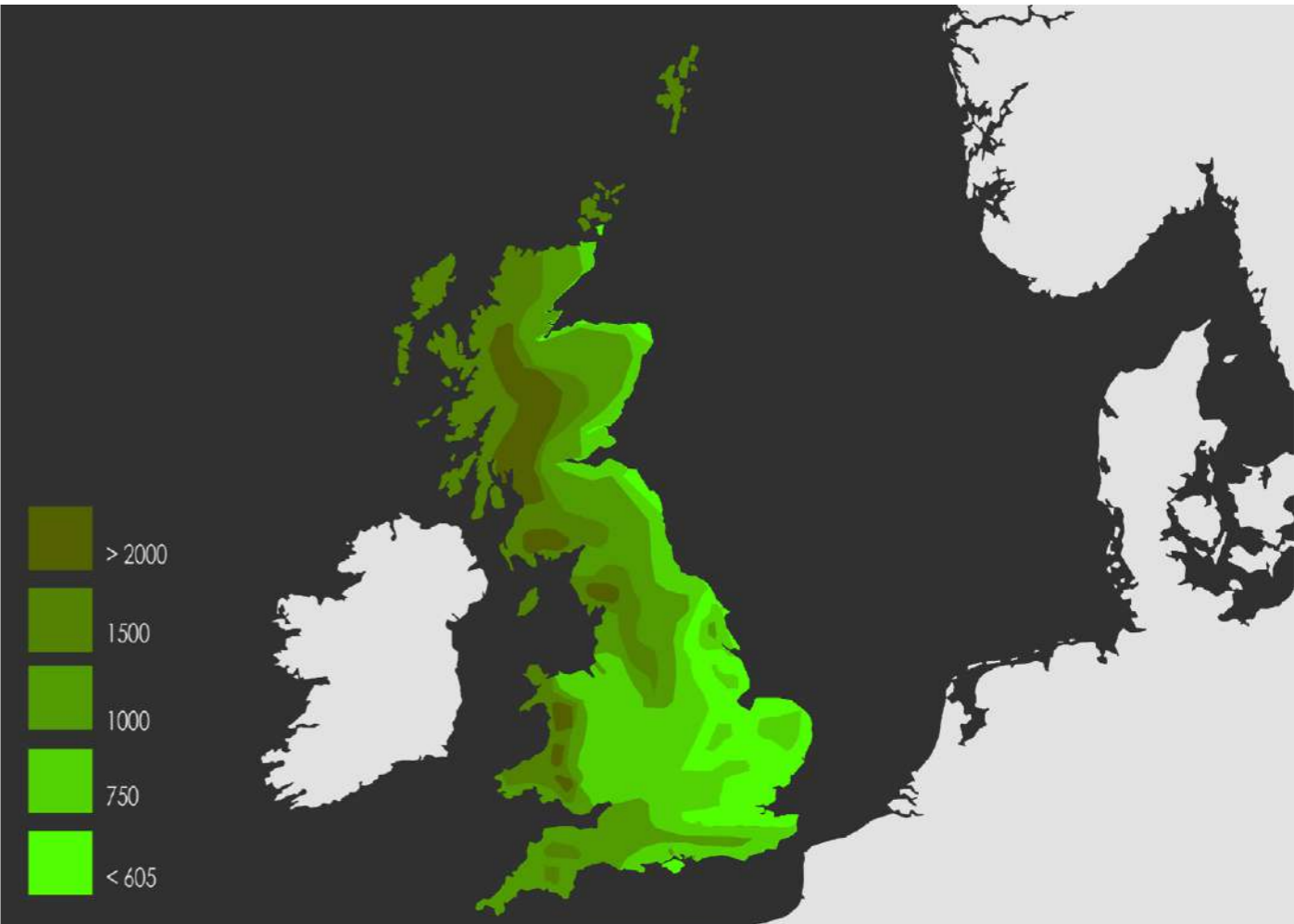
### SNOWFALL

Snow falls from November to April and February is snowiest month.

Numbers of days with falling snow: 20 days along the coast, 80 days in the grounds.

### WIND

Scotland is the windiest country in Europe. Eastern Scotland is one of the windiest part of the UK. The strongest winds are associated with the passage of deep areas of low pressure close to or across the UK. The frequency and strength of these depressions is greatest in the winter half of the year (from December to February). Wind directions: it starts to blow from the south or south west but later comes from the west or north west as the depression moves away.



Average rainfalls in the UK (mm/year)



Air masses affecting UK's climate



## OPPORTUNITIES

### TOURISM

Wildlife education centre (Greyhope Bay)  
Marine Wildlife Viewing

### EMPLOYMENT

Tourism opportunity creates jobs

### COMMUNITY INVOLVEMENT

People can be involved in nature in their own city  
Assist in protecting wildlife

### CONSERVATION

Community Involvement and awareness to promote

### GROWTH

We can provide a habitat to increase the wildlife population while also potentially introducing new species, etc.

## THREATS

### BUILDING ISSUES

Constraints on building due to species and their effected habitats

### LANDSCAPING CONSIDERATIONS

We need to consider the landscapes we're creating and the wildlife we cater for

### DEVELOPMENT

Our plans could be dangerous  
However, their development/growth, could lead to problems for the site, etc. in future

### SPECIES DISPLACEMENT

Species could be forced out of their homes



## SEASONS


Scotland's climate is quite moderate and very changeable. The climate varies a lot from one region to the other? We say that we can find the four seasons in just one day!

Winter is the coldest season with the snowiest month, February. Spring is the sunniest season, with the most sunny days of the year. Summer is the warmest and driest season and then Autumn is the wettest season, and is very windy as well. Peak of precipitation intensity is at summer and autumn.

Along the coast there are frequently storms, coming from the sea.



The beachfront through the different seasons



## GEOGRAPHY AND LANDSCAPE

WE BELIEVE WE CAN UTILISE THE POTENTIAL  
OPPORTUNITIES PRESENTED BY THE COASTLINE

## WHAT POTENTIAL DOES THE LAND PRESENT

Aberdeen beach stretches approximately 4km. The natural formation of the coast has developed gradually over a number of years. A number of different factors have resulted in the changes of the beach front and have contributed to the natural formation of the coast line of today.



1885



1937



1967



2018

## FORMATION OF THE COASTLINE

An example of the coastline actively changing is the outlet of the river Don. The outlet has been subject to depositional features which can be clearly demonstrated in comparing the two images. The opening has also experienced southward drift of material which has caused the opening to move and also deposit the material, closing up the opening.

### Sand Dunes

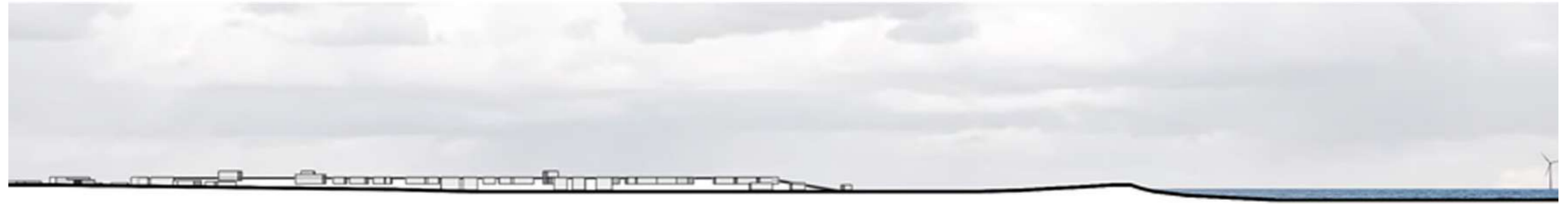
The face of the sand dunes had been eroding at the rate of 2 metres per annum from 1868 to 1962 and the foreshore was becoming steeper.



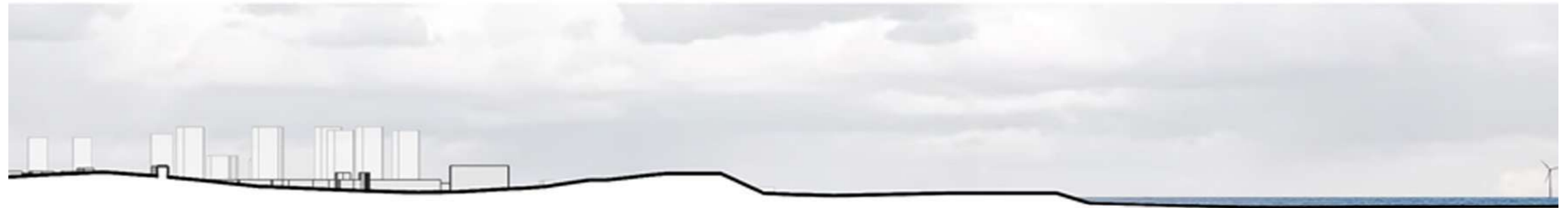
Mouth of the River Don



Sand Dunes at balmedie beach



North Section



Mid Section



South Section



Human Impact

## TOPOGRAPHY

From the south section we can see that the city centre lies towards the harbour, as this is the most dense. Broad Hill, the highest point within the site offers a panoramic view and could present an opportunity.

Towards the north the city becomes less dense with several high rise buildings, this could be a result of it's location being one of the poorer areas of Aberdeen. The site at this point is mostly landscape covered by the golf course.

In the current typical section through the coastline we see the impact that humans have had on the site in terms of creating sea defence. On top of what used to be naturally formed sand dunes, we see the addition of the three-tiered sea wall to protect the coast. This may seem like a necessary evil, as whilst it protects the land it creates a barrier at human level from approaching the beach. Aberdeen's tides can range from +0.05m during low tide to +4.85m at it's highest tide.

## RESTRICTIONS

The active landscape and coastline can also provide restrictions to the North East of Scotland.

The process of erosion is a major factor in the shaping of the coastline. Erosion can occur from wind and wave velocity which wears away at the coastline, causing it to retreat. This causes a threat to the existing landscape and the current use of the coastline.

The depositional features create restrictions by creating a build up of material in a condensed area over a period of time. This then needs to be maintained, or will continue to build up with the potential to create a variety of problems.

An obvious restriction within the North East of Scotland is the weather, the strong winds, low temperatures and frequent storms make it hard to interact with the exposed beachfront.



Dunnotar



Aberdeen Beach Front

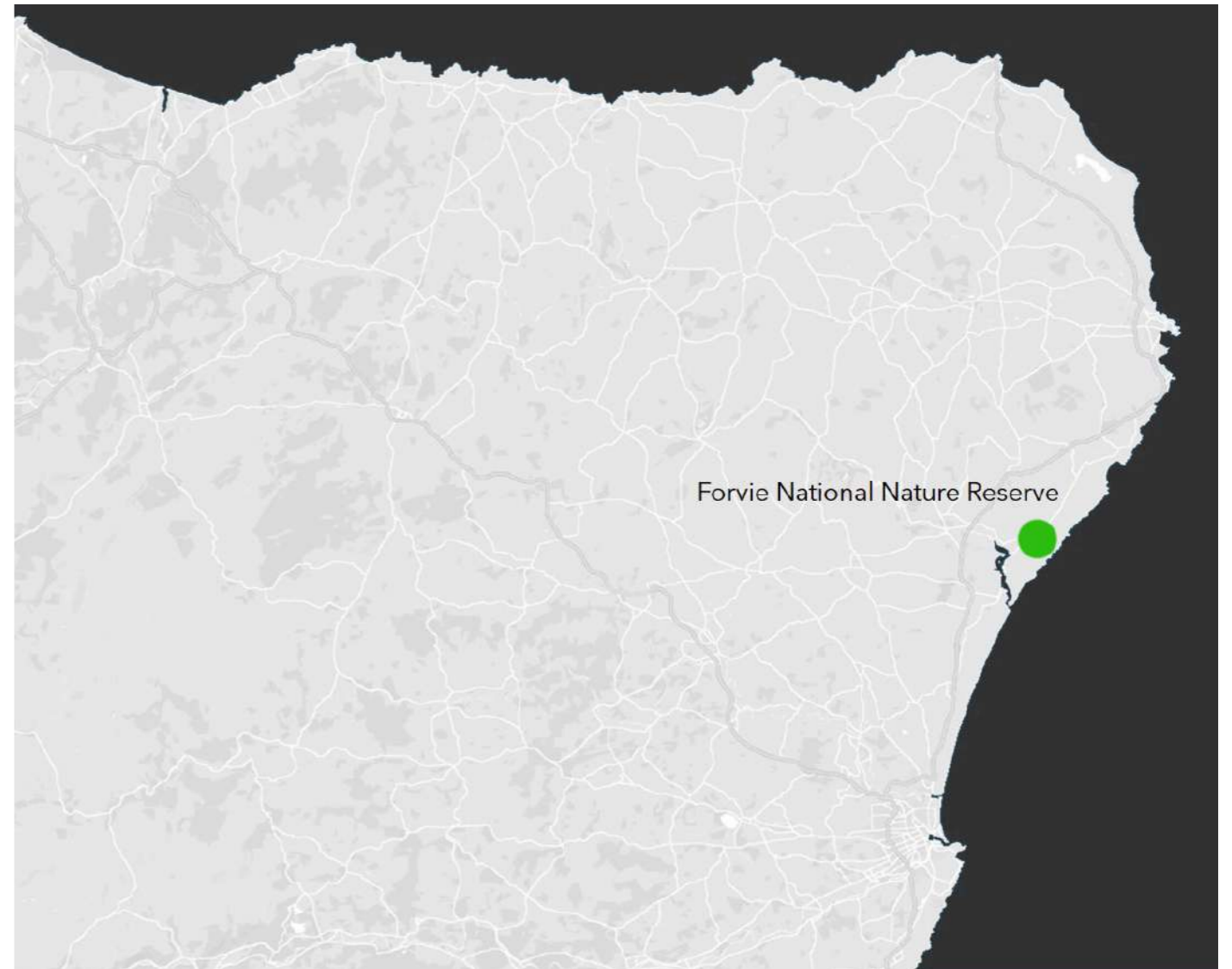
## CONFLICTS

The formation of the coast can also cause conflicts involving people and the environment. Conflicts can arise within a conservation area which is subject to a strong impact of erosion on the site.

For example, Forvie National Nature Reserve is a designated Special Protection Area on the Aberdeenshire Coast. The conflict has arisen due to the respect to the land which attracts many tourists throughout the year, however, the site is reducing yearly, causing the conflict of whether to introduce a sea defence feature to protect the land.

The landscape can be subject to leisure conflicts with the potential for a variety of different leisure activities that can take place on the coastline. Some leisure activities, such as walking, picnicking and horse riding, are encouraged at Balmedie, while some (like dune jumping and quad-biking over sand) are not allowed.

Conflicts can arise regarding the development of the city. For example, the introduction of the off shore wind turbines has caused conflicts with the locals who believe that this causes visual harm to the natural landscape.



Conservation



Forvie National Nature Reserve



Balmedie Beach Map



Wind Turbine Map



Balmedie Beach



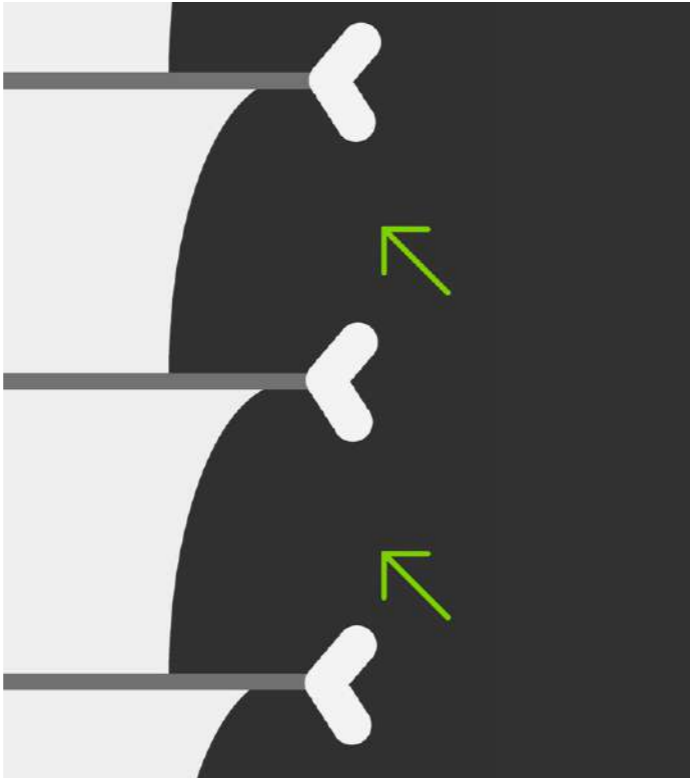
Wind Turbine

**GROYNES**

30 Timber groynes were installed along the beach front in 1962. The groynes were installed to interrupt the water flow and reduce the movement of sediment down the beach, maintaining the formation of the sand.

Geologists believe that during the falling tide as the water drains from the beach and is forced through an artificially narrow gap, the resulting increase in velocity will increase the erosional power of the sea locally between the groynes resulting in the formation of channels cutting down into the beach.

We also see the addition of granite block formations called revetments as part of a beach nourishment programme back in 2006, where 70 000m3 of sand were added over the course of a two week period. The revetments act as a wave breaker to help slow down the effects of longshore drift.



Groynes Diagram



Groynes Aberdeen Beach

## SEA WALL

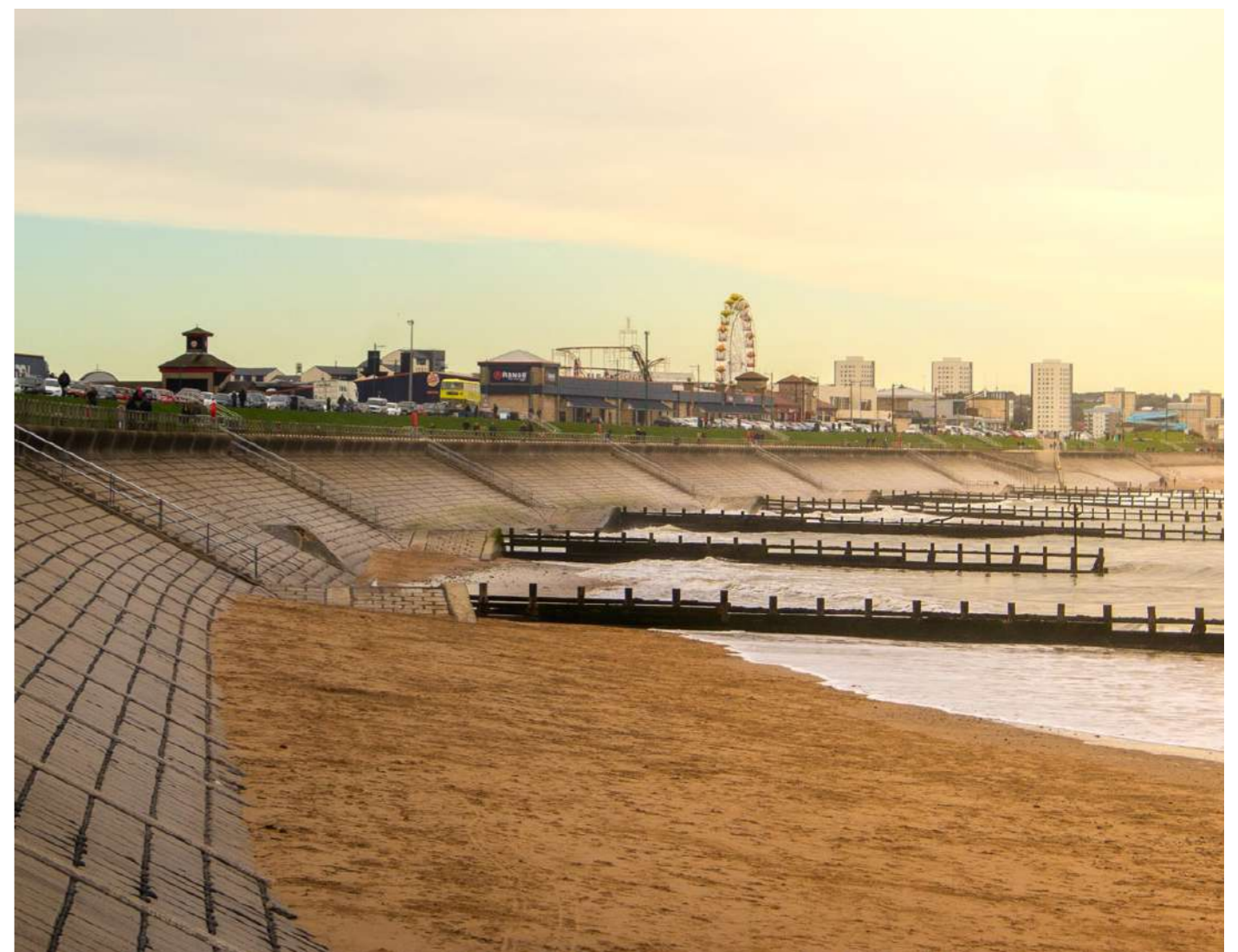
The sea wall was also constructed in 1962 to protect the rapidly eroding face of sand dunes after the groynes were installed to protect the rapidly eroding face of sand dunes. After the groynes were installed, a terminal erosion problem was anticipated at the north end.

The sea wall consists of sloping blockwork, with steel sheet toe pulling and a coping at the top of the slope.

On a natural beach normally the wave energy is dissipated naturally by the upper shoreface and dune systems onshore however the presence of the sea wall means that the wave energy is merely reflected or deflected back towards the sea taking the sand with it and promoting erosion at the base of the sea wall and further along the beach.



Old Sea wall



Sea Wall

## CASE STUDIES

### SNUG ARCHITECTS - MILFORD-ON-SEA BEACH HUTS

These beach huts have been designed to withstand the impact of the sea and are designed to withstand a «perfect one-in-200-year storm event». These huts therefore act as a sea wall, giving more functions to sea defence mechanisms. The design uses precast concrete and brings the promenade onto the roof of the huts, transforming the public realm.




## CASE STUDIES

### CF MØLLER - STORKEENGEN (STORK MEADOW)

Described by the firm as an «architectural multi-tool», the Storkeengen is designed to protect the nearby town of Randers from floods and transform the nearby fields into a wetland nature park.

This offers an excellent attraction for visitors, and makes the most out of what could have been a bad situation, by embracing and controlling the floods to offer a new type of environment.





## ABERDEEN AS AN INSPIRATION

WE BELIEVE WE CAN TAKE ELEMENTS FROM NATURE AND  
IMPLEMENT INTO THEM ARCHITECTURE

CONTEXTUAL INSPIRATION



ENVIRONMENT

LANDSCAPE

ELEMENTAL INSPIRATION

WATER



TEXTURES

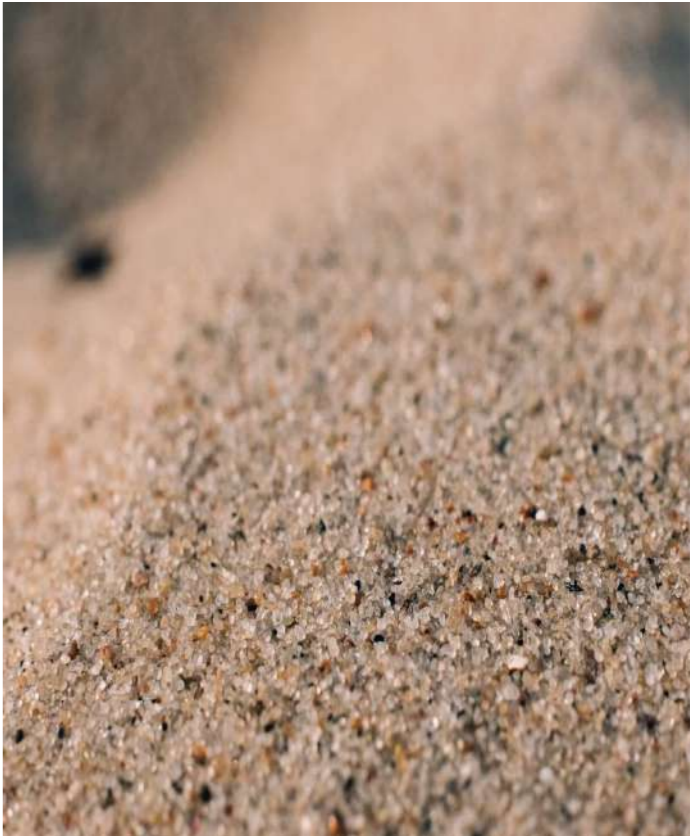
GRASS



GRANITE



SAND



SLATE



LIFE



WATER CUBE | PEDDLE THORP WALKER



An aerial architectural rendering of a city masterplan, presented as if it were a torn piece of paper. The rendering shows a dense urban layout with various building footprints, streets, and green spaces. A prominent feature is a large, circular, multi-level structure situated near a body of water in the lower right quadrant. The paper is torn along its edges, revealing a solid light green background on the left and a solid light blue background on the right. The text 'MASTERPLAN PROPOSALS' is centered on the left side of the torn paper.

## MASTERPLAN PROPOSALS

WE BELIEVE WE CAN LEARN FROM PREVIOUS  
CONCEPTS ON THEIR SUCCESSES



Aberdeen Beach Baths



Aberdeen Beach Baths

### **PROPOSED BATHING STATION & PROMENADE John Rust & Alexander Gibb & Co (1893)**

Opened in 1896, the Beach Baths proved popular with visitors and locals, due to its popularity it was extended in 1898 to include a swimming pool, water chutes, additional baths, and Turkish baths. The large prominent Victorian red brick chimney became an icon feature of the beach front which overlooked the beach and could be seen from around the City, generations of Aberdonians and tourist's leaner to swim in the freshwater pool. The enhancements and redevelopment of the beachfront would help transform Aberdeen to a prime beach resort destination which would help build on the current tourists. The axonometric sketch proposed by John Rust & Alexander Gibb from 1893, was fulfilled in full and developed into a full masterplan scheme for the Aberdeen beach front.



Sketch for the promenade



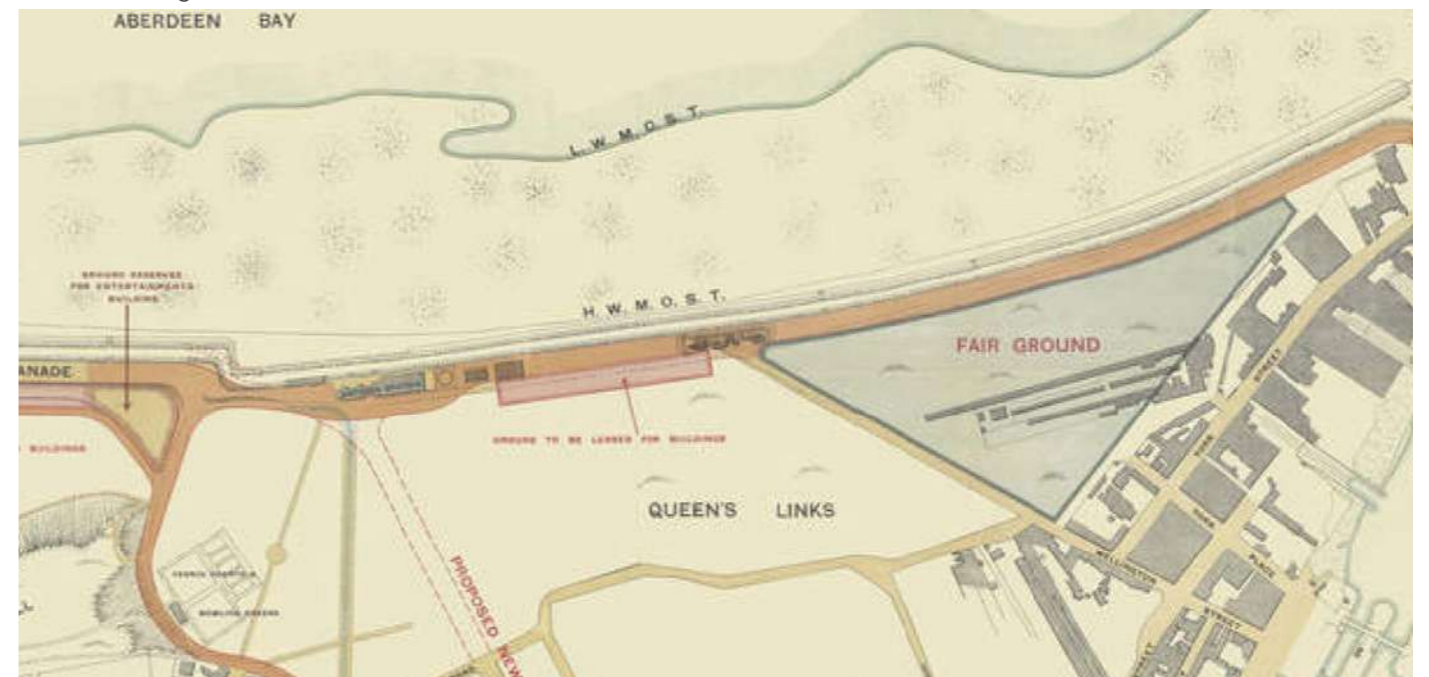
Aberdeen Beach Ballroom and Promenade



Aberdeen Fairground

## PROMENADE UPGRADE MESSRS. ROBERTS AND HUME OF BATHGATE (1923)

In its heyday Aberdeen attracted visitors from all over the UK for a Holiday retreat and was one of Brittan's Leading holiday resorts. In 1919 the City council took the decision of upgrading Aberdeen Beachfront which included large entertainment units, comprising of concert halls, dining halls, and shopping arcades. This proposal continued to develop on the original scheme by John Rust and enhances the of the tourist attractions with the addition of fairground attractions and within Messrs proposal, the addition of the Beach Ballroom was incorporated within the 1926 proposal, which became one of the finest dance halls in Scotland.



Lay-out plan showing proposed development

## OVERALL SEAFRONT MASTERPLAN W.DOBSON & PARTNERS (1949)

Apart of the 1949 masterplan designed by W.Dobson & Partners, showing the overall redevelopment of the Aberdeen beachfront, this radical plan would completely transform the landscape of the beachfront and transform for tourist and local Aberdonians. The local authorities never followed the ambition of the plan due to development restricts due to land use and politics, they realised the design was a comprehensive design scheme that considered the most realistic opportunity's which could resolve the issues suffering at the beach front. The masterplan was open to amendmets and improvements, but to still conform to the general principles of the plan.

The plan outlines some significant changes to the landscape of the past beach proposals, these included linking the Greyhope bay with the beachfront by a new bridge crossing over the river Dee, the redevelopment of the central beachfront which included a three-level promenade with a miniature railway connecting the north and south beach front together, and the new buildings which included swimming baths, hotel, concert hall and aquarium.

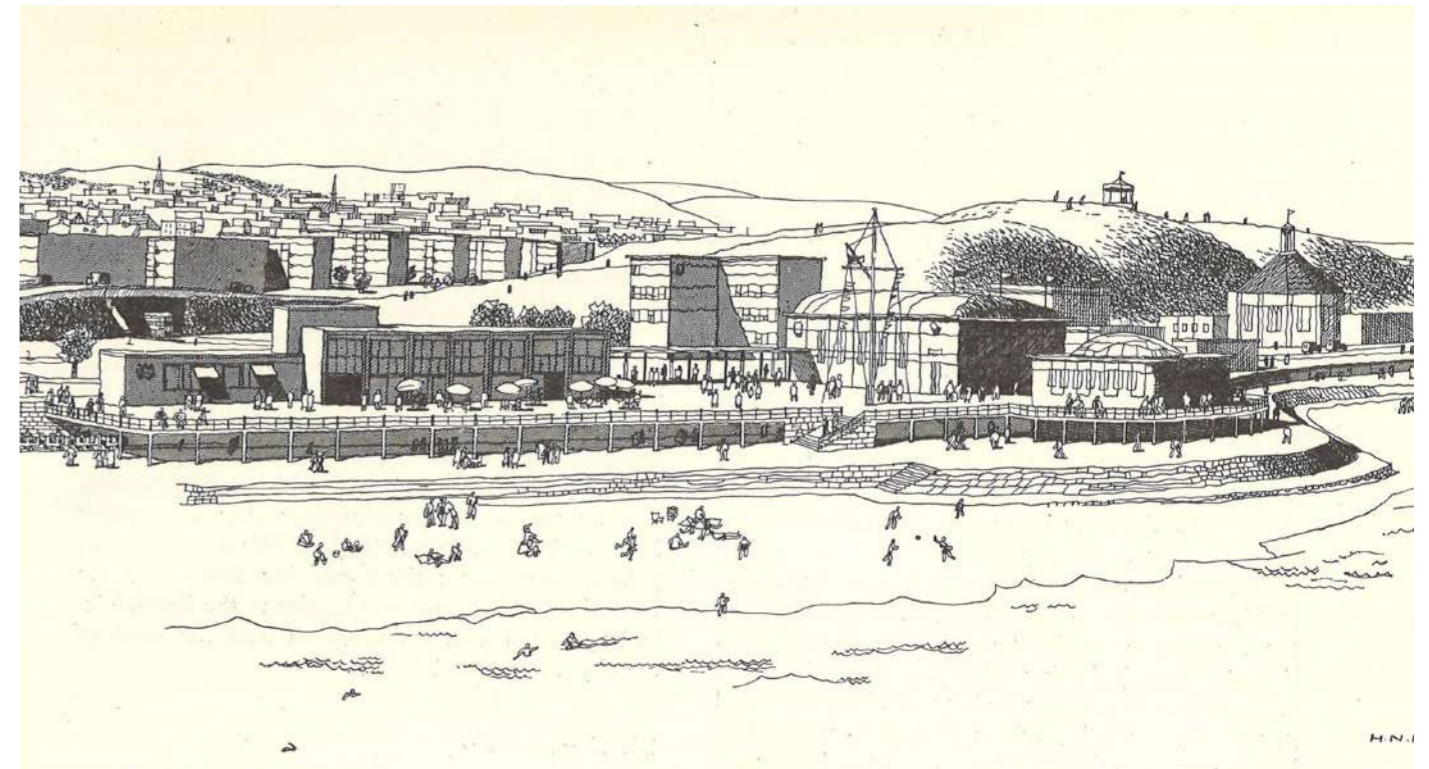
With the masterplan, it opened endless potential ideas of the waterfront for further development as a recreational centre, which would continue to build on the large tourist demographic already established. Within the plan, the boulevard proposes to connect the waterfront to the city centre by tram, bus & car. The masterplan develops a unique opportunity with a manmade beach, this can be controlled by the Local Authorities on when to open the facilities, typically during the summer months. This concept of bringing water into the land could potentially become a feature or create a unique space within the site which would have some control of the elements.



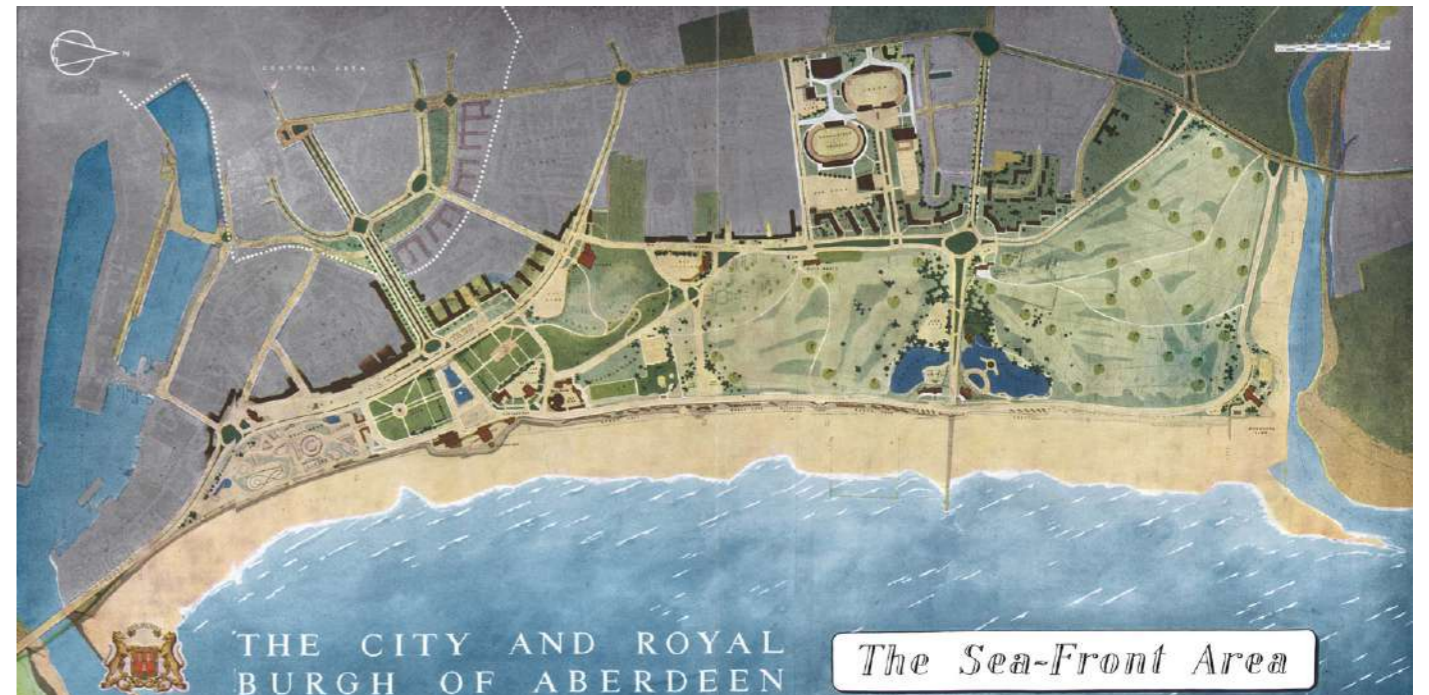
Sea Beach Scheme



Proposed Bridge Crossing



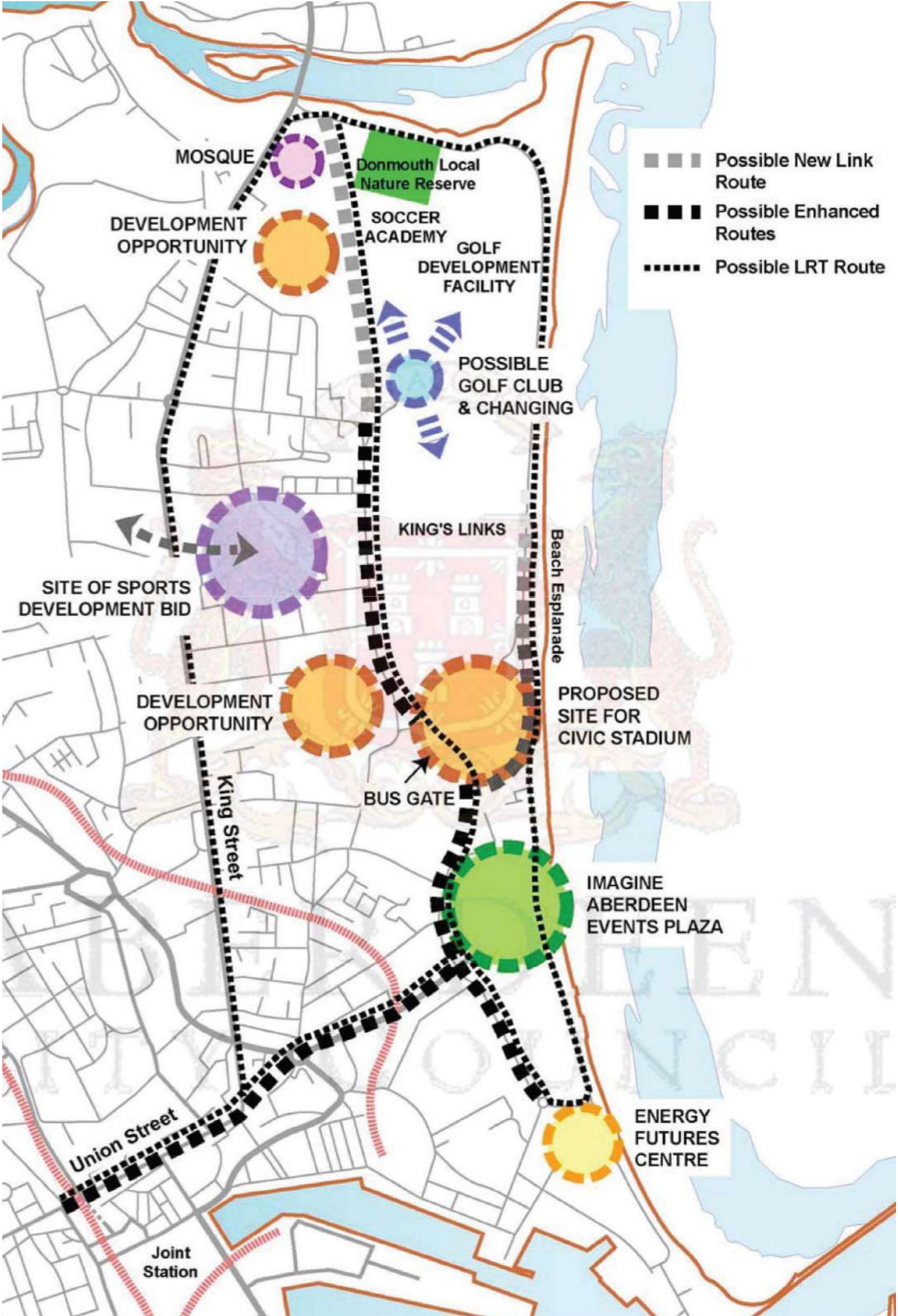
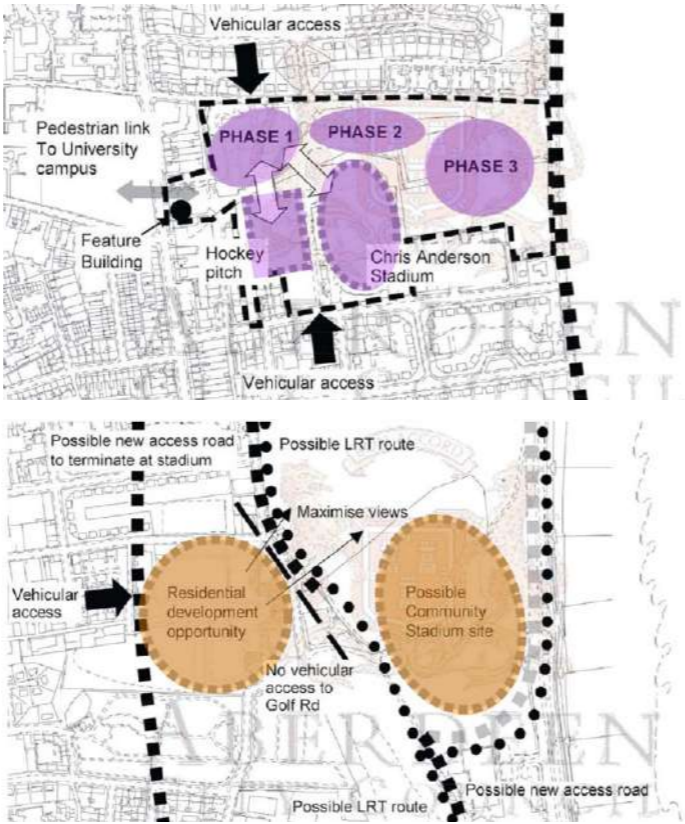
Sketch Proposal of Beachfront



**NORTH BEACH PROPOSAL  
ABERDEEN CITY COUNCIL (2003)**

Conceptual proposal of the North redevelopment of the beachfront which presents an existing opportunity to develop a vast scale of land. It is clear for the proposal that there are three sporting development opportunities, these include the redevelopment/new football stadium, enhancement of sports and a new Aberdeen plaza, each development proves a challenge in its self-due to the politic issues which could arise.

The masterplan highlights elements which are outlined within the 1947 Masterplan, this evidently shows sporting and high-quality architectural proposes are a driving theme throughout the plans. The council outline Environmental factors of the site with the preservation of the existing Natural reserve, this could be expanded and developed into a large reserve which could attract new visitors to the waterfront development.



# **ABERDEEN MASTERPLAN BDP (2015)**

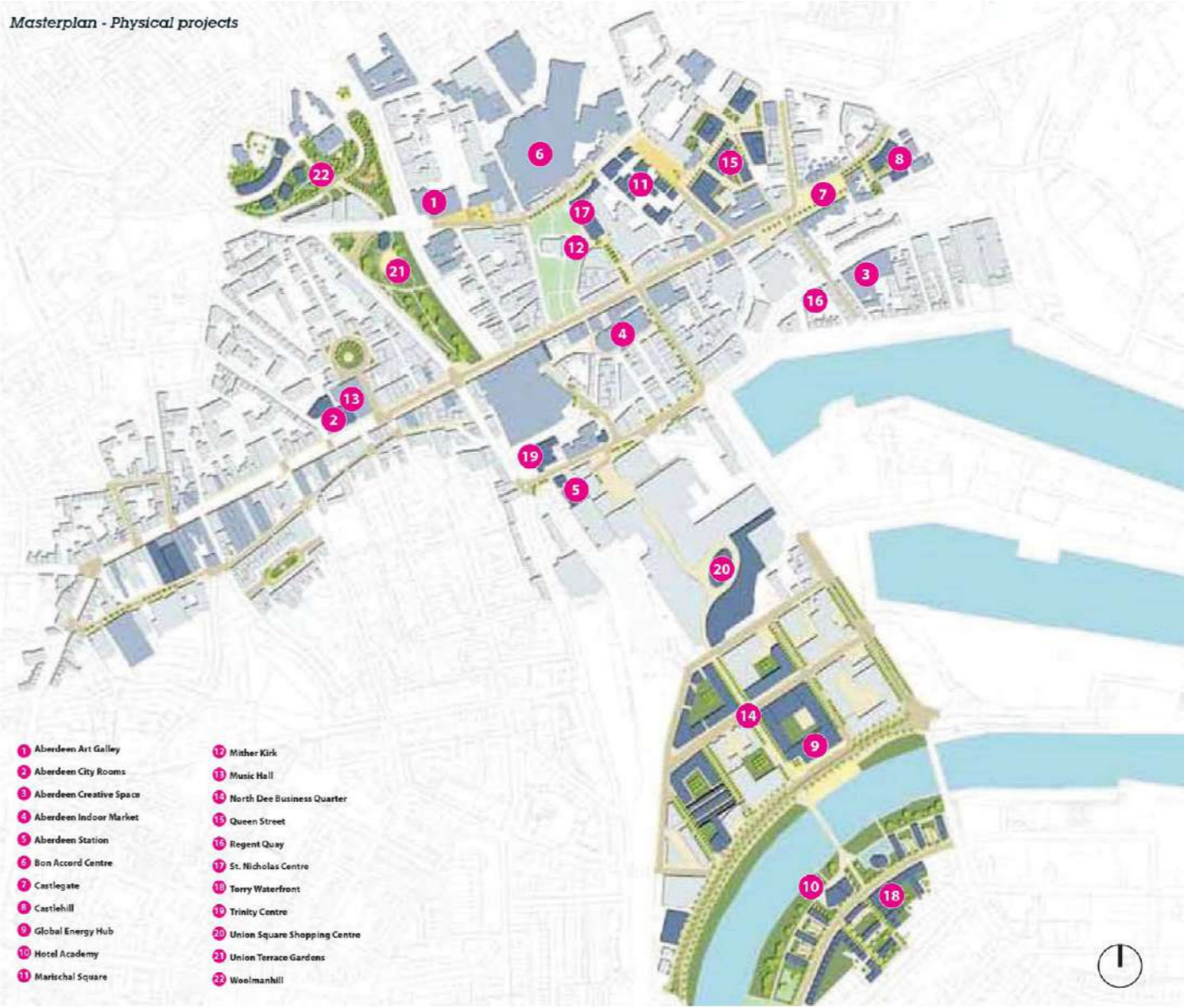
In 2015 Aberdeen City Council alongside BDP architects developed a city centre masterplan which captures the key fundamental principles of what Aberdeen can offer, this plan developed and improved local facilities already existing and instated new proposals which will transform the city centre. Along the River Dee waterfront, BDP has a proposal within the masterplan which would connect Torry to the city centre and provide a mix use development across the new bridge over the dee. Although the Masterplan is a great opportunity to the City Centre and will create new jobs and attract tourists, there appears to be a lack of design and connectivity to the beach front which appears to be forgotten. Aberdeen and its beach waterfront have significant opportunities to be developed, views across the North Sea, the golden sands. With future masterplan proposals of beachfront, masterplans should tie in with the current 2015 BDP Masterplan and collectively this can transform Aberdeen and it's post-oil future.



The River Dee



Union Street



Masterplan for Aberdeen city centre

**ABERDEEN BOARDWALK  
OPPORTUNITY NORTH EAST ONE (2018)**

Opportunity North East One has proposed redeveloped to reconnect the lost connection between the City Centre and the Aberdeen beachfront, the boardwalk, although very conceptual, would be like the 21st-century boardwalk that can be seen in New York City's 10th avenue. The idea, although in very early stages, could become a part of a large-scale redevelopment that Aberdeen is desperately needing to attract tourist to ensure Aberdeen's economy strives from a post-oil future. The radical ideas of this proposal have engaged with members of the public on how they would like to see the beachfront transformed for future generations, and now outcome from these discussions will be evolved into a master plan. Mrs. Craw, CEO of Opportunity North East One states that 'Our own version of the Highline if you like.' The development could bring great opportunity for Aberdeen, as the proposal also suggests the addition of an international whiskey center which the likes of Bordeaux, France as already has for wine along with gourmet food. This could create a central hub for the North East of Scotland and could become apart of an international whiskey trail around Scotland.

**The Press and Journal**

**Tourism groups exploring ways to create an Aberdeen version of the New York Highline**



Could Aberdeen one day have something like this?

The north-east's leading tourism bodies are currently exploring ways to create Aberdeen's version of the New York Highline.

Bosses from Opportunity North East (One) hope that a boardwalk could be created to allow visitors and residents to get more easily between the city and the beach.

It is believed that this, along with other new initiatives such as an international whisky centre, could allow tourism to become a £1billion industry in the north-east by 2023.

The idea is one of many being touted by the development body which it believes would help make the north-east a global go-to tourism destination.

Addressing an audience of around 200 people yesterday at the VisitAberdeenshire tourism conference, One chief executive Jennifer Craw said innovation was the key to ensuring the region's economy diversifies effectively away from oil and gas.

She said: "Innovation is at the heart of how we adapt to the future. Over the last six months we started to talk about what would people within the region like to see for the future.



New York highline



New York highline

**NEW BEACHFRONT PROPOSAL  
TRANSITION EXTREME & TEAM (2018)**

Grahame Paterson, the CEO of the Transition Extreme sports centre, has outlined proposals to transform the waterfront into a “gateway” destination to attract more tourists and north-east locals alike as the local economy moves to expand from a “dependency” on oil and gas’ – Press & Journal 2018. Grahame and this team at Transition extreme already offer a wide range of extreme sporting facilities which has a regular demographic of brining new and existing local and tourists for rock climbing, BMXing and skateboarding. Grahame has realised that there is a massive opportunity to develop the beach front and transform this into a hub for extreme sports not just for the UK but worldwide. The proposal, although conceptual to date he highlights Aberdeen natural beauty and would cerate a stunning backdrop for thrill seekers. In addition to Transition extreme plan for expansion there several ideas within the pipeline which collectively could help from a masterplan that will help improve Aberdeen’s economy.

**The Press and Journal**

**Masterplan to help Aberdeen’s  
beachfront rival the likes of Barcelona,  
Nice and Helsinki unveiled**

by Kieran Beattie    June 12, 2018, 5:00 am    Updated: June 12, 2018, 8:15 am



An artist’s impression for a proposed building at the Greyhope Bay centre, left, and Sydney harbour, right

A detailed masterplan for the future of Aberdeen’s beachfront could help the Granite City turn the tide and rival the likes of Barcelona, Helsinki and Nice, according to the boss of one of the region’s most popular attractions.



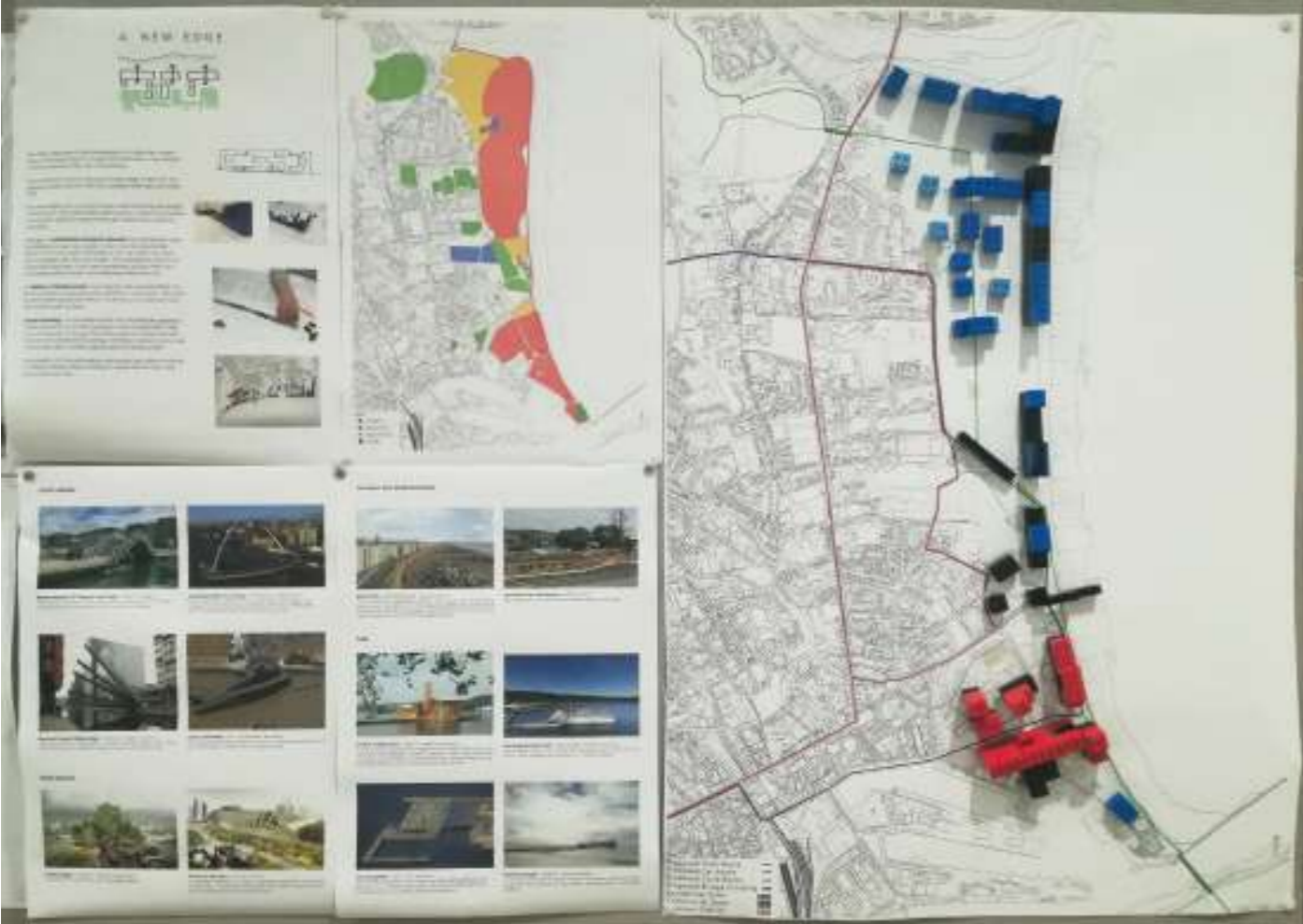
UNIT ONE GROUP PROPOSALS (2018)



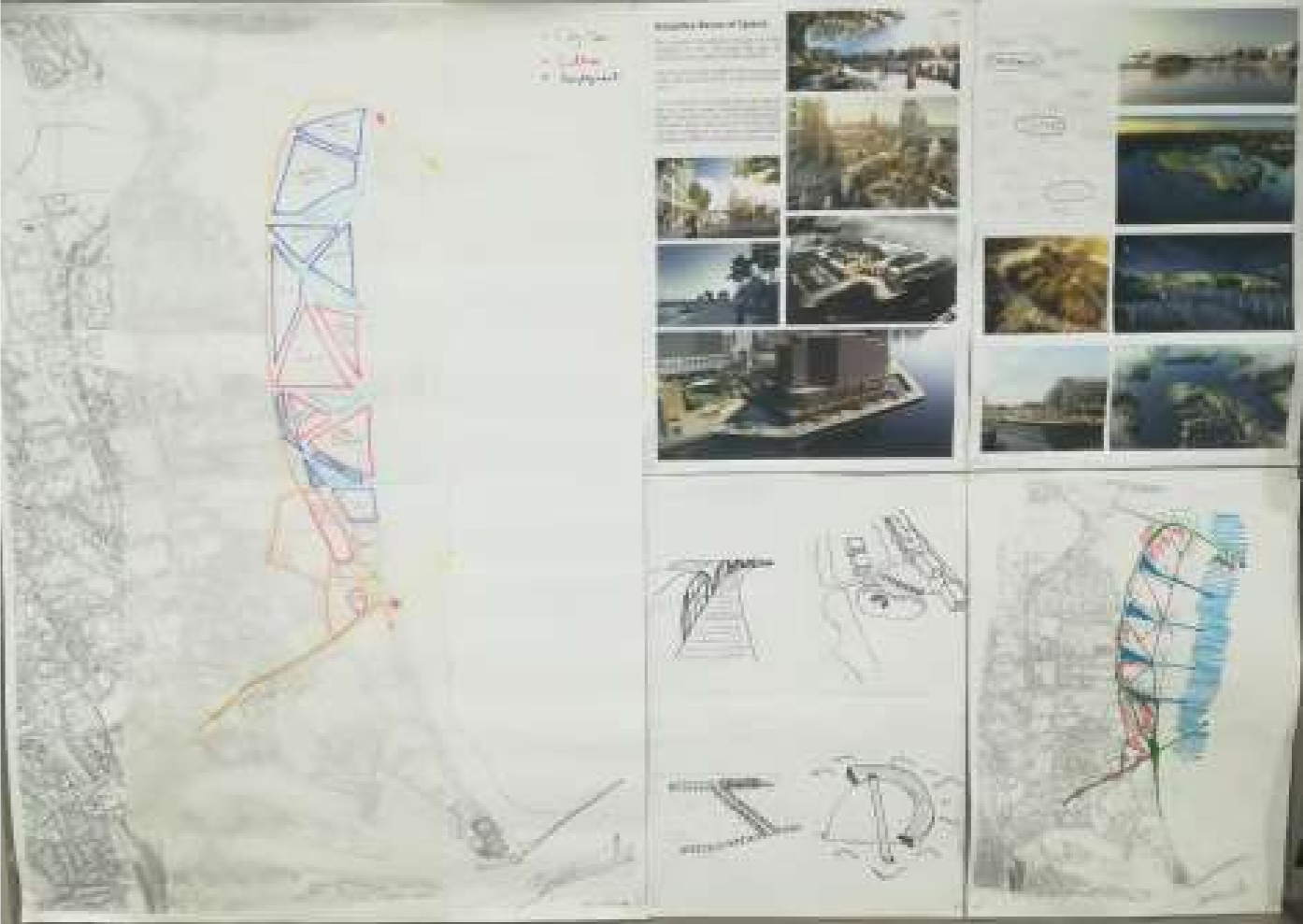
SPORT, LEISURE, SOCIAL HOUSING AND EMPLOYMENT



ABERDEEN 2050+



A NEW EDGE



ADAPTIVE REUSE OF SPACE

LIVING EDGE  
UNIT ONE PROPOSALS DEVELOPMENT (2018)

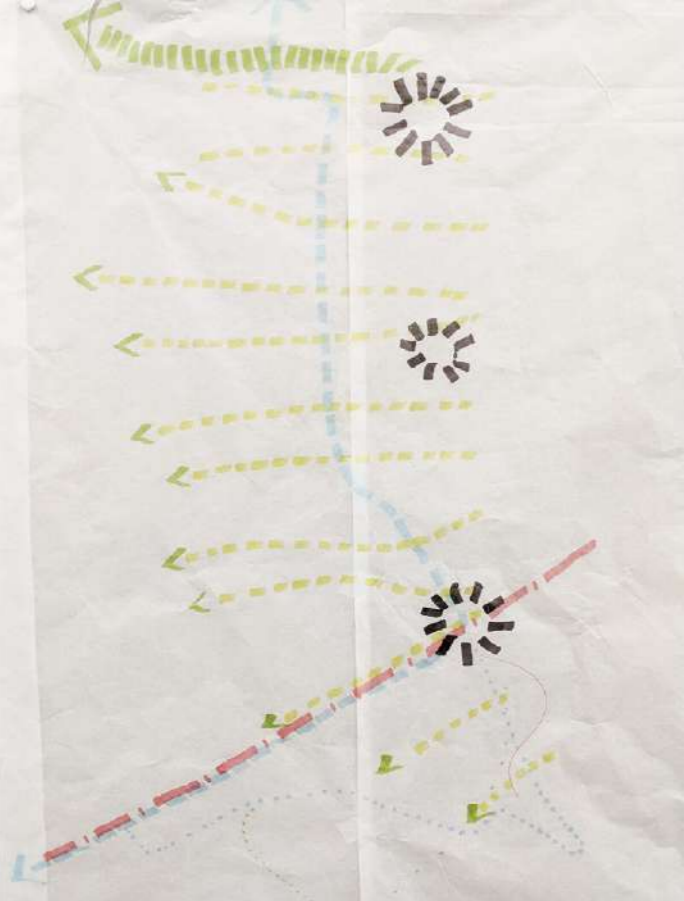
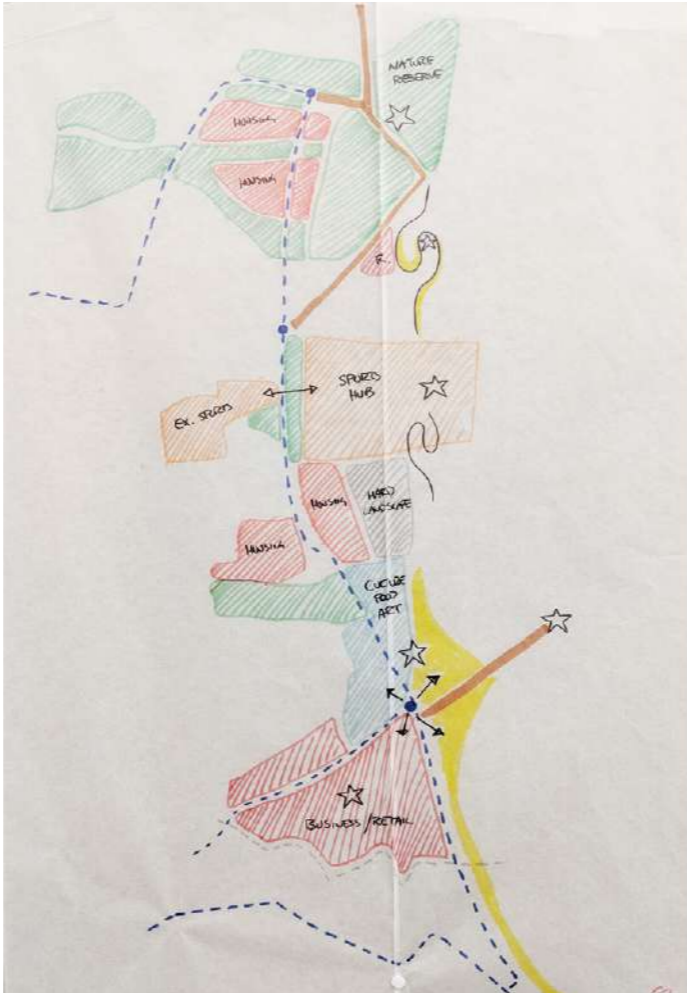


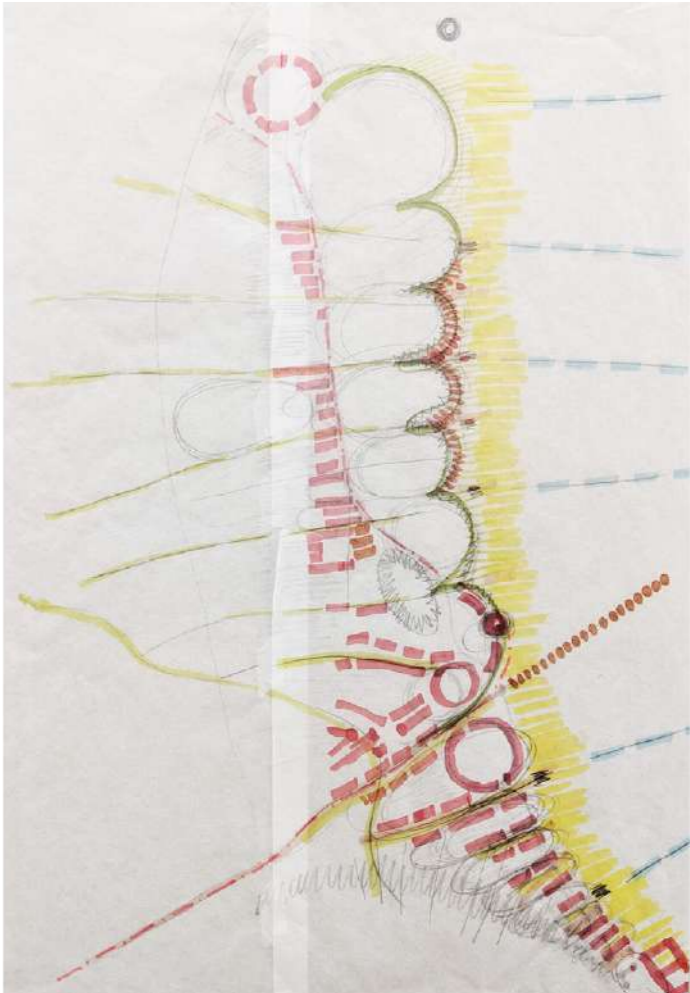
Diagram of Access points



Facilities proposal



Detailed CAD version of the last proposal



Masterplan Proposal after a discussion with the tutors



Diagram of main streets and connectivity



Early Stage Masterplan Proposal



Masterplan Sketch Proposal



Refinement of Masterplan Proposal



## CONCLUSION

## **WE BELIEVE WE CAN ENHANCE SPORT & LEISURE FACILITIES**

Sporting and leisure facilities appear to be a key driving factor with the development of past masterplan proposals of the Aberdeen beachfront, the city already has several state of the art facilities including Aberdeen Sports Village, Transition Extreme & Pittodrie Stadium, these are all key assets which attract tourists to Aberdeen. This could just be the start of the sporting development within Aberdeen, and new additions and facilities could be a development which could make Aberdeen the sporting destination in the UK. This development could become an Olympic Park style with accommodation for competitions, extreme sporting facilities which would build on the Transition extreme vision and the construction of a new football stadium which would become the iconic landmark for the site.

## **WE BELIEVE WE CAN IMPLEMENT QUALITY ARCHITECTURE**

Currently, the architectural of the existing buildings have no architectural quality, which appalling due to see the sheer natural beauty of what the beach to offer, creating a high-quality architecture would help compliment the beauty of the site. Aberdeen City Council outlined in their 2002 masterplan to create a landmark building which could help attract tourist to the beachfront if the proposal was fulfilled this could have Guggenheim effect, this landmark building designed by Frank Gehry completely transformed the once-failing industrial Spanish city to one that thrives off the tourism industry. Creating a focal point along the promenade of the transform the beachfront and create a focal point which would attract to tourist to Aberdeen, this design could become an International whiskey canter which has already been suggested in the 2008 proposal by Opportunity North East One.

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### ABERDEEN AS AN INSPIRATION

Photos done by Rachael O'Donnell

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