SHORTLIST FOR DATA CENTRE SITE DEVELOPMENT

Scottish Futures Trust/Host in Scotland, Crown Estate Scotland and Scottish Enterprise – June 2023 Update

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PREFACE
SITE SHORTLIST REPORT

This report has been commissioned by Scottish Futures Trust/Host in Scotland, Crown Estate Scotland and Scottish Enterprise in order to provide an overview of potential data centre locations in Scotland. The work follows up on the Scottish Government Green Datacentres and Digital Connectivity Vision and Action Plan (https://www.gov.scot/publications/green-datacentres-and-digital-connectivity-vision-and-action-plan-for-scotland/).

This latest revision represents the third iteration of the report after earlier editions in March and September 2021 which has allowed previous sites selected to be checked for their availability and updates on their development status to be included. At the same time, new sites for potential data centre development have been sought by contacting local authorities, various government agencies and property agents. This has resulted in an increase of 5 new shortlisted sites representing the best sites for data centre development across the country, bringing the total to 20. It should be noted that some of these sites are suitable for urban colocation use whilst other sites are considered more suitable for rural hyperscale development.

As before, we consider this work provides a reliable starting point and guide to investigate data centre opportunities and carry out further due diligence. We also believe that this report will be of interest to current data centre owner/operators in Scotland as well as potential new entrants to the market. Furthermore, the report may be of value to potential infrastructure providers and investors to consider future potential opportunities and demand/business cases in Scotland. This report adds to the existing suite of documentation that is available on www.hostinscotland.com in respect of data centre and subsea infrastructure development in Scotland and readers are encouraged to read this document in conjunction with that material.

The work has been undertaken by TechRE, a specialist data centre consultancy that provides advice to existing and prospective data centre owners, occupiers and investors. The study uses a methodology and approach which is consistent with how the data centre industry identifies sites for further detailed due diligence. This included a desk-based study of potential sites, and importantly, site visits to validate information.

All sites included within the Site Shortlist Report are considered as good potential sites for data centre development. Whilst some sites have received an amber flag for connectivity, this is a reflection of the current terrestrial connectivity across Scotland nationwide but particularly in some rural locations. However, these sites have still been shortlisted given their other unique attributes for data centre potential and future upgrades of infrastructure may be possible, noting the planned digital infrastructure underway, for example through the Scottish Government funded R100 Programme that could generate additional opportunities.

Within the report, data output mapping from the Scottish Environment Protection Agency (SEPA) has been relied upon as a first assessment check for flood hazard risk. For those sites which fall within a 0.5% or higher chance of flood risk (or one in 200 years - the typical threshold limit for data centre development), some landowners are able to provide more detailed evidence or mitigation works to demonstrate such risk is acceptable and in such cases, we have recommended investors undertake further due diligence.

Host in Scotland

SCOTTISH FUTURES TRUST

Crown Estate Scotland
Oighreachd a' Chrùin Alba

Scottish Enterprise

CONTENTS

SITE SHORTLIST REPORT

SITE SHORTLIST
OVERVIEW

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OVERVIEW
SITE SHORTLIST REPORT

We have based the data centre site selection criteria on two very different requirement types which in our view best match potential demand within the Scottish IT landscape. The first is hyperscale or dark green storage requirements, which are focused around huge-scale renewables and predominantly rural sites in close proximity to existing and planned offshore wind projects. The second is an urban colocation-focused requirement, which is predominately based around areas of high population density based on secure sites with a minimum 20MW power threshold.

A. Rural Sites (UK Back Office)

The UK hyperscale market has historically been housed in Slough but is increasingly moving along the M4 corridor as hyperscalers and wholesalers search for large sites with significant power supplies. This has pushed demand west to towns such as Didcot, Swindon and the Vantage facility at Newport. To date, there has been negligible demand for sites from hyperscalers north of Slough, let alone north of the border, however, this is potentially going to change due to four key factors:

i) Lack of Power
Data centres require huge amounts of power which can conflict with local development plans in areas of high population growth and it is getting harder to secure planning consent for new facilities along the M4 corridor. More importantly, it is getting harder to secure power at scale, which can take up to 5 years to supply at huge cost. This lack of powered land has pushed land prices to levels beyond £10 million per acre and in some cases, above £15 million, which has a direct impact on site profitability.

ii) Cost of Power
The well-documented power supply issues and subsequent drastic increase in per kW pricing as a direct consequence of the Russian invasion of Ukraine, have directly impacted data centre profitability and in some locations, commercial viability. As such, all data centre operators and especially hyperscalers, are looking at long-term solidity of pricing and supply.

iii) Dash to Renewables
Enterprise customers are demanding that their data be stored, analysed and processed in highly efficient facilities that protect rather than impact the environment. In addition, the debt and equity markets are also demanding that their cloud investments are focused on green activities and not those with high carbon footprints. The only viable long-term solution for hyperscalers is to source power directly from renewable power plants under private wire contracts – this requires huge areas of land which is at a premium along the M4 corridor.

iv) Hot Southern Summers
Southern England recorded temperatures over 40's centigrade on a few occasions in July 2022. These unseasonably high temperatures created significant issues for data centre operators and several facilities suffered serious outages as a result of the hot weather. As global warming continues, the incidence of extremely high summer temperatures in Southern England is likely to increase leading to more potential outages which are severally damaging for the industry.

Impact on Scotland

This heady mix of power price increases; lack of power security; unavailability of powered sites; and unprecedented hot weather combined with a requirement for direct feeds from renewable power plants has created a perfect storm for Scottish sites to provide 100% renewably powered data centres for dark green storage facilities – a green Slough back office. To facilitate this potential new wave of demand, we have focused on Scotland's green storage site selection based on the following key criteria:

OVERVIEW (CONT'D)
SITE SHORTLIST REPORT

- Access to huge-scale renewable power plants combined with grid connections. The hyperscale requirements will be attracted to Giga watt schemes, but we have included sites with access to 100MW and above.
- Sites with large acreage to house unobtrusive low rise buildings over 1m sq.ft (based on 10,000sq.ft per MW).
- We have focused site selection on locations in close proximity to the ScotWind projects plus also any other large scale onshore renewables scheme that can provide 100MW+.
- Clearly any sites within the central belt or close to Aberdeen and Dundee (i.e urban locations) with large scale land and power supplies exceeding 100MW have been included within this category.

Note, we have largely discounted fibre connectivity as, in our opinion, diverse connectivity can be resolved as part of the wider construction budget.

Target Market

The target market is the large hyperscalers, such as AWS, Azure and Google who could potentially each require a dark green rural facility to back up their main UK operations along the M4 corridor.

B. Urban Sites (serving domestic colo demand)

The second market sector is regional colocation facilities, alternatively referred to as regional edge sites. Demand for data centres in urban locations will be driven by two sources.

- Enterprise demand for cloud and managed services which will be based around areas with relatively high population and commercial activities (i.e Glasgow, Edinburgh, Dundee and Aberdeen).
- A secondary demand driver will be access to "eyeballs" for edge-related latency-based applications (IOT, AR/VR, AI, 5G etc).

In our opinion, demand for such facilities will start at the 2-5MW range. However, to facilitate the longevity of planning and futureproofing, we have focused on the urban colocation site requirements at 20MW and above, within sites over 4 acres with access to multiple connectivity providers including tier 1 carriers, full fibre providers and alternative networks. Whilst this is a high barrier which might limit sites, it does also help to market Scotland as a location of high-power availability and focuses results on quality, not quantity.

Note, that a separate report identifying sites for edge facilities in Scotland is planned as a follow-up to this report which has different (smaller) capacity requirements and site criteria compared to regional colocation facilities.

Target Market

The target occupiers will be wholesale and retail colocation operators providing data centre services to the hyperscale cloud and managed services market. Note that it is highly unlikely that these parties would build themselves, but contract directly through third-party data centre operators or connectivity-focused players. In addition, the target market would also include edge specialists.

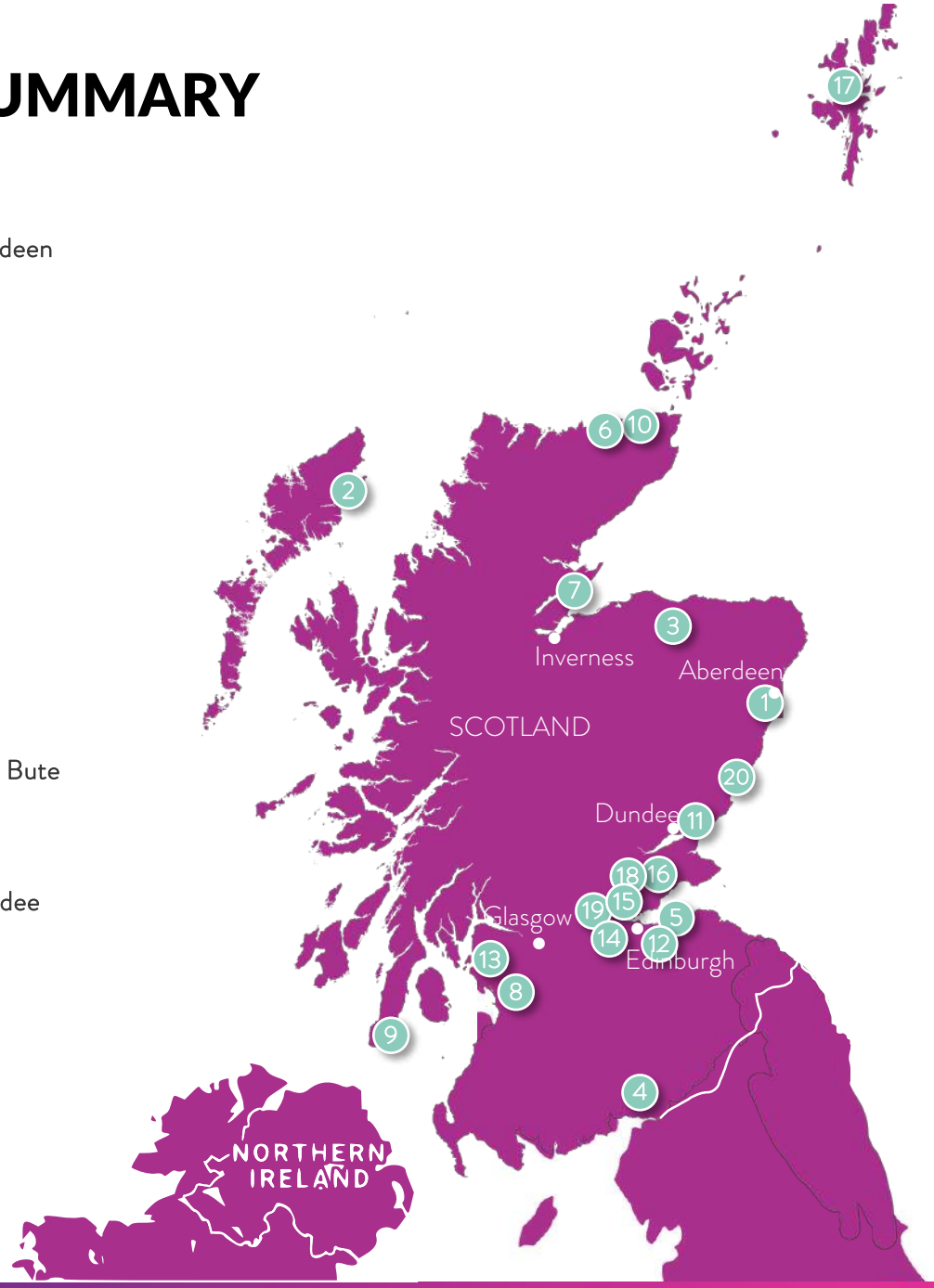
Conclusion – The Opportunity for Scotland

With the previously described headwinds facing the data centre markets down South, the opportunity for Scotland is becoming more and more apparent. Using this report to market sites with abundant energy, low cost and direct access to renewables will put into question why real estate teams are straining to find expensive, under-powered and non-green data centre sites around Greater London and the M4. The journey that enterprise has begun globally will create data centre opportunities marked under the proposed "urban colocation sites" in the site selection report. However, the hunt for large renewable sites by hyperscalers is only just beginning and Scotland must present itself now via reports such as this.

SITE SHORTLIST SUMMARY

MAPPING

1. Aberdeen Energy Transition Zone, Aberdeen
2. Arnish, Na h-Eileanan Siar
3. Blackhillock, Moray
4. Chapelcross, Dumfries and Galloway
5. Cockenzie Power Station, East Lothian
6. Dounraey, Highland
7. Fearn Airfield, Highland
8. i3, Irvine, North Ayrshire
9. Machrihanish, Campbeltown, Argyll and Bute
10. Meygen, Caithness, Highland
11. Michelin Scotland Innovation Park, Dundee
12. Millerhill / Old Craighall, Midlothian
13. Peel Ports Hunterston, North Ayrshire
14. Pyramids, Bathgate, West Lothian
15. Queensferry One, Fife



16. Queensway Park Data Centres, Fife
17. Scatsta Airport, Shetland Islands
18. Westfield Park, Fife
19. Whitecross, Falkirk
20. Zero Four, Montrose, Angus

SITE SHORTLIST
METHODOLOGY

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METHODOLOGY
THE PROCESS

Stage 1, Update Target Locations

- Update hot spots – data centre areas of interest, based on strategic locations that could work for data centre use. Heat Mapping process identifying:
- Population centres
- Existing colo facilities
- Major office markets, business parks, fintech hubs, medical facilities
- Universities, R&D, AI hubs
- Government initiatives
- Renewable power
- Subsea & terrestrial connectivity

Stage 2, Market Review & Site Sourcing

- Contact property agents, local authorities and government agencies.
- Source new potential opportunities which meet base site criteria
- Confirm status and availability of existing Short List (SL) and Long List (LL) sites
- New sites that meet base criteria are added to available SL/LL sites to create a potential longlist pool for further review.

Stage 3, Site Longlist High Level Selection & Scoring

- Conduct individual site visits and analysis and further refine long list pool
- The remaining sites are then scored based on high level criteria (the 7 P's):

- Position
- Plot
- Power
- Ping
- Protection
- Programme
- Proposition

UPDATED LONGLIST REPORT

Stage 4, Site Shortlist Detailed Scoring

- Prepare a potential new Short List from sites rated highest for further detailed assessment.
- The detailed assessment involves the completion of a more in-depth matrix scoring exercise based on typical data centre operator site selection criteria.
- Preparation of risk analyses including:
- SEPA flood assessments
- Flight paths
- Other hazards such as COMAH sites
- Fibre mapping undertaken by Farrpoint

UPDATED SHORTLIST REPORT

METHODOLOGY

DETAILED NOTES

Stage 1,
Identify Target Locations

- Involved the preparation of heat maps identifying existing data centre activity and areas of potential demand from a range of generators. Layering this information over one another yielded broad areas of interest for data centre target locations (see Appendix 1)
- Issued base level site criteria for potential new opportunities including being i) capable of getting data centre / industrial approval based on land use zoning or future planning intention ii) at least 4 acres easily accessible from major roads or highways iii) capable of providing minimum of 215,000 sq ft gross floor area over 2 floors. iv) capable of being supplied with at least 20 MW of power v) close to major fibre routes, points of presence (PoPs) or cable landing points vi) outside areas prone to flooding and away from hazards such as chemical uses, petrol stations, military storage, flights paths, High Voltage lines etc.

Stage 2,
Market Review & Site Sourcing

- Sourced new opportunities by contacting local authorities; major property companies; public organisations as well as over individual agents
- Over 350 individuals contacted by email requesting details of any sites that meet base level criteria
- Existing Short List and Long List sites checked for their availability and further updates on status. All previous Short List sites (15) were considered still available whilst previous Long List sites (36) were reduced slightly due to recent changes.

Stage 3,
Site Longlist High Level Selection & Scoring

- Sourcing led to a potential addition of some 60 new sites across Scotland
- Further validation via analysis and checking base level criteria had been met (particularly in relation to power availability) as well as around 30 individual site visits subsequently reduced the pool via an initial sieve assessment to sites taken forward as the refreshed long list.
- The refreshed long list sites were then assessed across a range of indicators (the 7 P's) to be either a green, amber or red reflecting a site's attributes from strong to less favourable. Indicators included Position (location); Plot; Power Supply; Ping (connectivity); Protection (hazards); Programme and Proposition (unique story) – see the different thresholds in the 'High Level Scoring Assessment'
- RAG assessment based on the 7 P's created a total high level score with additional weighting applied to Proposition.

Stage 4,
Site Shortlist Detailed Scoring

- The long list was further reduced to a potential short list after a cut off point following high level assessment. Any new Short List site was required to be at a minimum equal to the quality of previously selected Short List sites
- Potential Short List sites were then subject to more detailed analysis based on extensive assessments – see list in 'Detailed Scoring Assessment'.
- Connections to the terrestrial fibre network for finalised Short List sites were assessed by Farrpoint
- Finalised Short List Sites also include information on their risk assessments including risks from flooding using Scottish Environment Protection Agency (SEPA) maps; flight paths (where relevant, which was taken to be within 30km of an international airport or 20km of a domestic airport), establishments covered by Control of Major Accident Hazards (COMAH) regulations etc.

METHODOLOGY

HIGH LEVEL SCORING ASSESSMENT

RAG Rating	*Position*	*Plot*	*Power (incl Renewables)*	*Ping*	*Protection*	*Programme*	*Proposition*
	Not considered a strategic location	4- 10 acres but in a rural location	20–50 MW potentially available but only in the future. (1) No renewable power available now or likely to be available in the future.(1)	Single fibre provision and no clear option for additional supply	Natural or man-made risk that requires major mitigation	Complexity on land status that means only be realized in the long term/cost	No obvious unique story
	Considered a strategic location for potential data centre development	4- 10 acres in an urban location	20–50 MW potentially available now or in the future.(1) Potential good supply of renewable power (>20MW) available in the future.(1)	Limited fibre providers but with potential for upgrading	Natural or man-made risk that needs further investigation	Mitigation works required or hurdle to clear but clear programme in place	Unremarkable proposition that doesn't single out the site for special attention amongst its peers
	A strategic location & close to major population (>250,000 within 40 kms)	> 10 acres with potential for future growth	> 50 MW potentially available now or in the future.(1) A good supply of renewable power (>20MW) already available	Multiple fibre providers & Tier 1 providers /alt. networks	No hazards observed	No impediments and site presents s a fast route to market opportunity (eg approved masterplan in place)	A compelling unique story that marries key attributes of the site

Note (1): Based on announced projects likely to be realized in the next 3-5 years

METHODOLOGY (1 of 2)
DETAILED ASSESSMENTS

Criteria	Assessment	What are we looking for? / Rating assessment			
POSITION	Population	Eyeballs - Lots of potential customers on doorstep	> 250,000 within 40 km radius	Between 100,000 to 250,000 population base within 40km	Low population, rural location (<100,000 within 40km radius)
	Cluster potential	Potentially creating a Scottish Slough	Wider location could support multiple data centres organically creating a cluster	Potential for cluster	No or limited cluster potential
	Data Centre occupiers	Multiple other facilities..because DC's cluster	Multiple local data centres within a 20 km radius	Other data centre within a 20km mile radius	No data centres within a 20km radius
	Customer base - Hyperscale	Could this location realistically attract hyperscale?	Large population base of > 1M within 100 km	Population base 0.5M - 1.0M within 100km	Population base <0.5M wihin 100km
	Customer base - Edge	Is there edge potential - based on local eyeballs, commercial or academic endusers?	Population base >250,000 within 30 km	Population base over 150,000 - 250,000 within 30km	Population base under 150,000 within 30km
	Customer base - Private Sector	Is there potential private sector customer demand	Significant access to large scale business. Major employers, MNC's financial services, ICT	Some access to large scale business. Significant employers, MNC's financial services, ICT	No or ltd access to large scale business, significant employers, MNC's financial services, ICT
	Customer base - Public Sector	Is there potential public sector customer demand	Proximity to local, regional or national govt and/or an area of regional assistance	Partial / ltd access to local, regional or national govt and/or an area of regional assistance	Remote location, away from govt hubs and not benefiting from regional support
	Customer base - Hyperscale Storage	Site has scale and location to support hyperscale remote storage	Over 100MW with associated land bank	Over 50MW with associated land bank	Under 50MW
PLOT	Land bank - Scale for growth	Site has significant scale to develop campus / hyperscale	Over 10 acres	4- 10 acres in an urban location	4 -10 acres but in a rural location
	Ease of access	Site is easy to access for equipment - and customers	Multiple transport links - Motorway, rail, plane	A1 / Motorway road access	Significant distance from road network - remote site
	Ease of development	Regular shaped plot already formed, ready for development	Vacant site, easily able to accommodate a future facility	Plot likely to lead to an inefficient design/layout	Major structures on site that need removal or extensive land formation required
	Suitability for Data Centre use	Compatibility with adjacent uses	Highly compatible with surrounding land uses	Somewhat compatable with adjacent uses	DC use would be incongruous with adjacent uses
PROTECTION	Flooding	No flood risk	Site lies outside any 1 in 200 year (0.5%) river or surface water flood risk zone (SEPA)	0.5% chance of river or surface water flood risk (SEPA) but major mitigation measures adopted	0.5% chance of river or surface water flood risk (SEPA) but minor mitigation measures adopted
	Storm surge	No storm surge risk	Site lies outside any 1 in 200 year (0.5%) coastal flood risk zone (SEPA)	Site lies within an area with a 0.5% risk of coastal flooding (SEPA) but major defences in place	Site lies within an area with a 0.5% risk of coastal flooding (SEPA) with no defences in place
	Flight path	Site is not at risk from plane crash at take off or landing	Site is not located below flight path	Site is located below flight path but planes are at an acceptable height (>10,000 ft)	Site is located below a flight path (<10,000 ft), with low flying planes
	Road, Rail, Other	Site is not at risk from major train or major road accident	Site is not considered to be at risk from any potential major rail or road accident	Site is located adjacent to rail or road networks, but risk is deemed minimal	Site is located immediately adjacent to rail or road networks, with potential risk
	Secure location	A well secured site that is easily protected from intruders	A site that can be easily secured at its boundary with high walls	A site that could be secured at its boundary but still a bit vulnerable	A site that is considered hard to secure
	Other man made hazards	No dangers to operations from local neighbours such as petrol station/ ind. plants	No man made hazard risks nearby	Some man made hazard risks in wider area, but risk deemed minimal	Risk from adjacent sites which could impact DC operations

METHODOLOGY (2 of 2)
DETAILED ASSESSMENTS

Criteria	Assessment	What are we looking for? / Rating assessment			
POWER	Substation / Primary Station	Is there a substation/primary station nearby?	Substation/ Primary Station onsite	Substation/Primary station within 10 km	No substation/primary station within 10 km
	Large power supply	Power supply of as significant scale i.e. over 50MW	Existing or future power supply servicing the site >50MW based on announced projects that can be realised in 3-5 yrs	Power supply between 20 - 50 MW currently servicing the site	Potentilal power supply between 20 - 50MW that could service the site but not available now
	Dual power supply	Power provided from two seperate substations	Power provided from two separate substations	Power provided from single substation, but on dual ring	Power provided from single substation, on single ring
	Renewable opportunity	Mains power supply matched by renewables	Site has a clearly defined renewables plan on an adjacent site	Site has a clearly defined renewables plan - but not an adjacent site	Site does not have a clearly defined renewables plan
	Renewables scale	Renewable supply at a significant scale	Renewable power supply >20MW already available	Potential renewable power supply >20MW based on announced projects that can be realized in next 3-5 yrs	Renewable power supply <20MW either now or in the future based on announced projects that can be realized in 3-5yr
		adjust scoring if the renewable power is not zero carbon i.e. some form of Energy From Waste (EFW) without carbon capture			
	Private Wire connection	To reduce cost, data centre is powered by renewables secured with a private wire	Private wire connection is probable	Private wire connection - some potential	No private wire connection is possible
PING	5G Roll out	Widespread coverage available	5G coverage in the area already in place	5G coverage in testing or planned	No 5G coverage
	Full fibre roll out	High availability of fibre to the premises	>60% of premises passed with FTTP	Between 20-60% of FTTP premises passed	<20% of FTTP premises passed
	Tier one carriers	Is the location close to Tier I providers like Zayo, Colt etc	<10km to a Tier One fibre provider	Between 10 -50km to a fibre provider	>50 km from a Tier One fibre provider
	Cable Landing Station	Data centre has direct access to a Cable Landing Station	Clear and viable Cable Landing Station plan	Some potential for CLS access	No CLS access possible
	Existing IX	Data centre has direct access to an IX providing significant connectivity benefits	IX located under 10 km	IX located within 20 km	IX not located under 20 km
	Fibre optic supplies from multiple providers	Data centre benefits from multiple telco connections with multiple entry ducts	Proximity to three of more fibre providers	Proximity to two fibre providers	Proximity to single fibre provider
PROGRAMME	Speed to market	Site can be secured and made operational quickly i.e. within 6 months	Site has substantial powered shell offering	Site does not have powered shell options, but does have a credible speed to market plan	Site can only be realised in long term once major hurdles overcome
	Construction required	Minimal constructions works, allowing fast fit out	Mechanical Electrical Plant (MEP) works only	Full scale construction - infrastructure works and designs all completed	Full scale construction required - design, planning, build
	Ownership issues	Site can be easily acquired	Single owner, happy to sell	Some issues constraining acquisition process eg protracted approval process	Acquistion likely to be challenging
	Planning Issues	Planning all secured with no barriers to commencing fit out	Planning secured	Planning in process or acceptable in principle	Planning process not started
PROPOSITION	Viability	Financially attractive	Potentially viable and could offer high return	Potentially viable but likely to be low return	Likely to be burdened by very high costs which would undermine viability
	Unique story	A compelling marketing story which appeals to potential investors	Marries two or more exceptional attribues - huge renewable story with speed to market	Potential for unique story to be crafted but not exceptional	No stand out unique story
	Strong Government support	Support which is expected to smooth/speed up the development process	Welcome data centre development and extra incentives on offer	Public sector likely to be positive to data centre development	No additional support on offer
	Long term prospects	Additional level of benefits that can be achieved in the very long term	Offers a layer of benefits above & beyond immediate opportunity eg possibility of multiple sites etc	Some offer of potential benefits in longer term but marginal upside	No obvious additional benefit in longer term

NOTES

Some assessments in the matrix scoring system is subjective and subject to professional judegment

SHORTLIST

ABERDEEN ETZ

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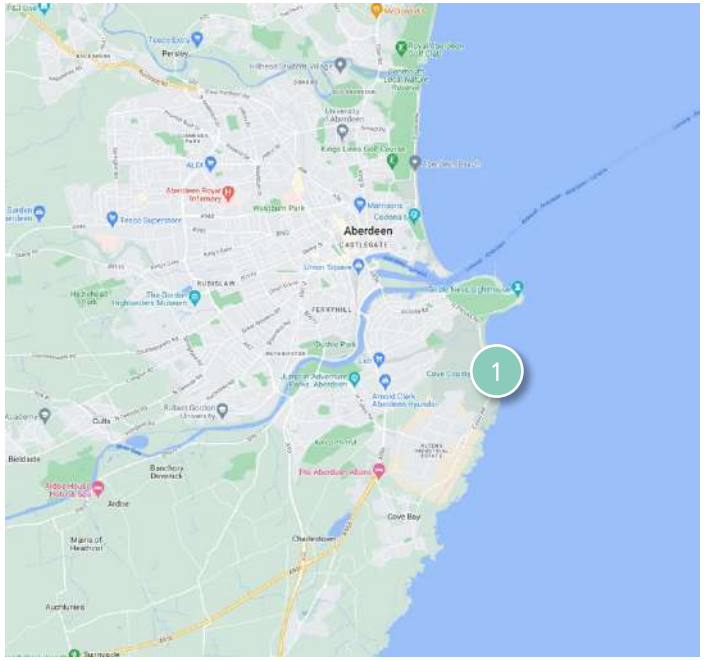
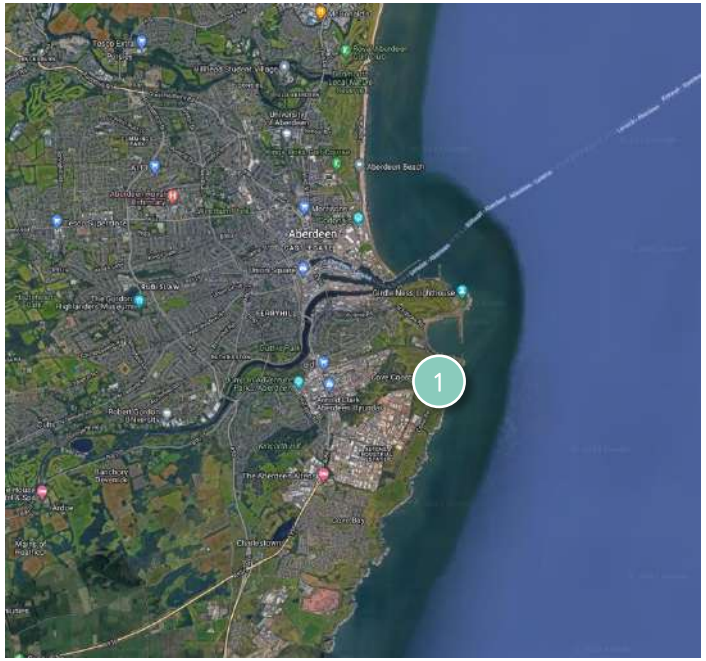
ABERDEEN ENERGY TRANSITION ZONE

OVERVIEW

Site Overview	The Energy Transition Zone (ETZ) will comprise specialist campuses for marine development, offshore wind, hydrogen, innovation & skills, building an innovative ecosystem. It covers an extensive area of ~100 acres of greenfield & brownfield land around and to the south of the Harbour. A masterplan is awaiting approval.					
Position: Aberdeen – circa 0.5m pop. within 40 km	Plot: Multiple options including in nearby Altens Ind Estate	Power: Proximity to major operational & planned offshore wind farms	Ping: Limited to Openreach and Neos	Protection: No major hazards observed	Programme: Extensive works underway but 2030 target completion	Proposition: Hyperscale or urban colocation
TechRE Comments	The site is being delivered by ETZ Ltd, a private company operating on a not-for-profit basis which has secured significant funds to provide new infrastructure. Over 10GW are planned from offshore wind farms off the coast of Aberdeen. Aberdeen Harbour is a national development project cited in National Planning Framework 4.					





ABERDEEN ENERGY TRANSITION ZONE

IMAGES

ABERDEEN ENERGY TRANSITION ZONE

PLANS

ABERDEEN ENERGY TRANSITION ZONE

FIBRE

Aberdeen ETZ

Legend

- Neos Network (Estimated)
- BT Ethernet Nodes (Estimated)
- BT Fibre Routes (Estimated)
- Scotland Data Centre Site Shortlist

0 0.170.35 0.7 1.05 1.4 Kilometers

FarrPoint

Notes

- Openreach fibre route in the vicinity
- Neos Network also nearby

Nearby PoPs:

- BT OHP/Ethernet Node

Note: Fibre routes are deduced from data available in the public domain.

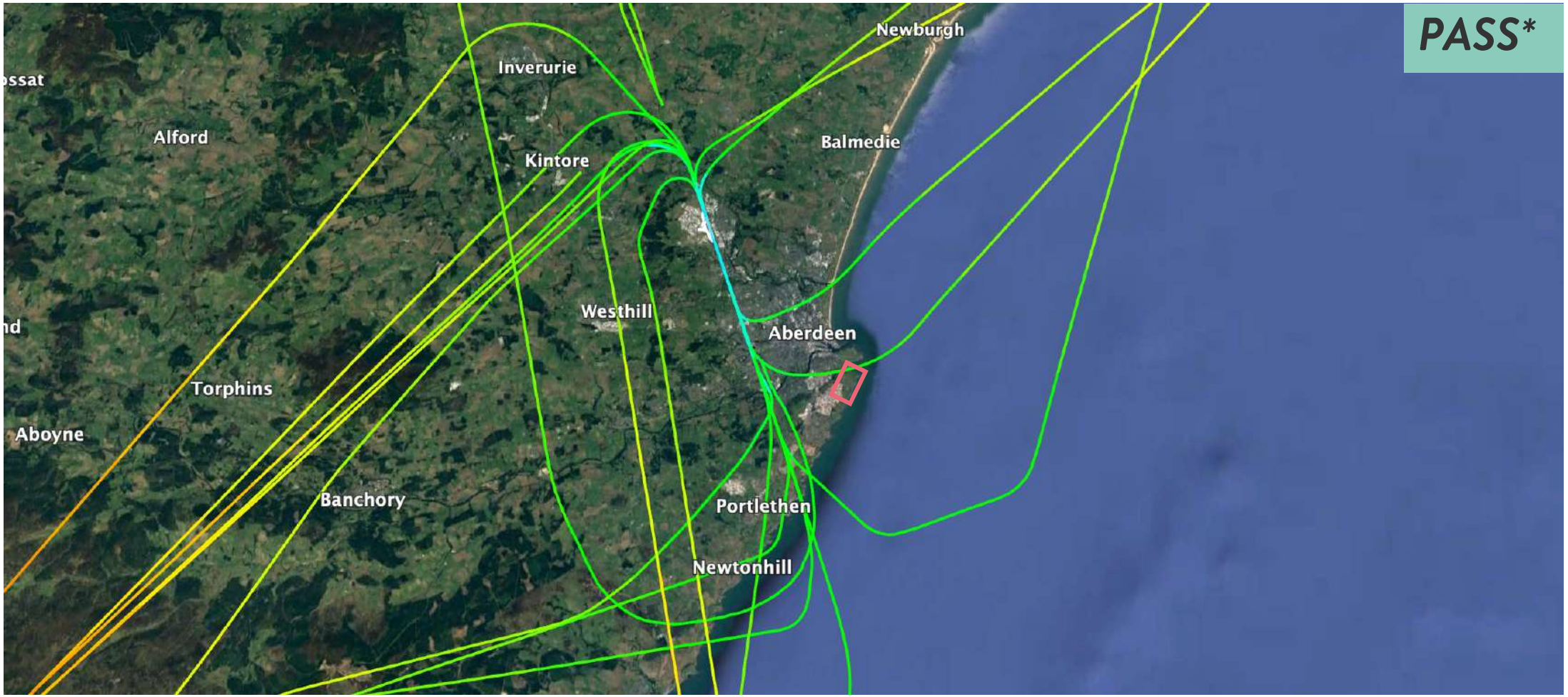
ABERDEEN ENERGY TRANSITION ZONE

FLOOD RISK ASSESSMENT

*TechRE assessment

ABERDEEN ENERGY TRANSITION ZONE

FLIGHT PATH ASSESSMENT



*Note, some flights observed nearby but >3,000 ft and not on the main path -TechRE assessment

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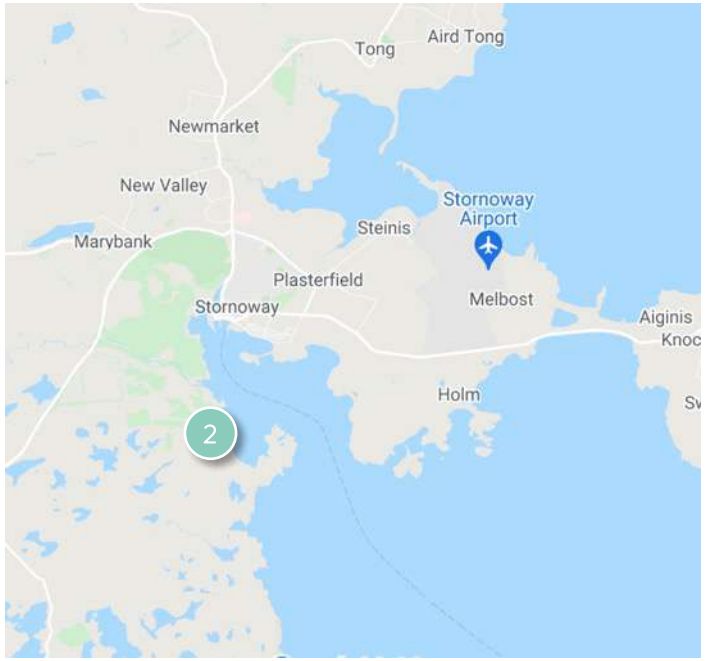
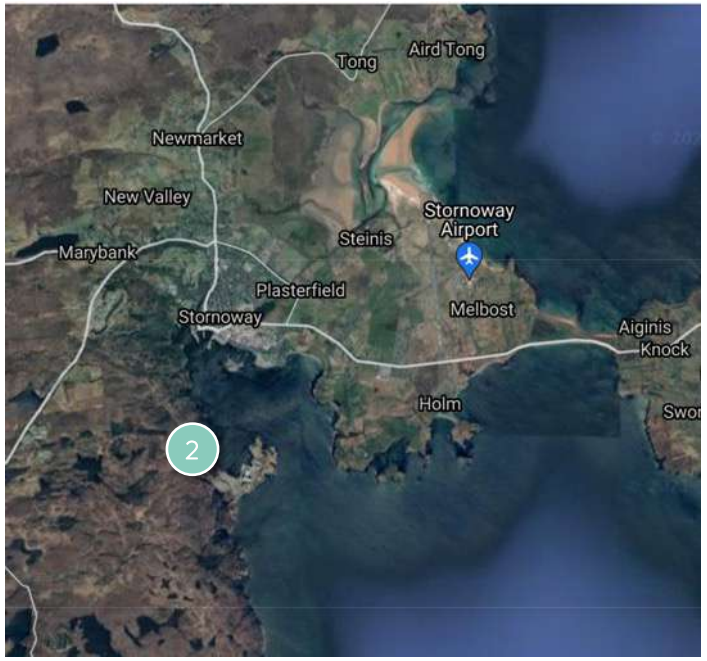
OVERVIEW

Site Overview	An opportunity to develop a data centre as part of the Green Outer Hebrides Energy Hub close to a new Deep Water Terminal in Stornoway (to be completed in 2023) with access to substantial offshore and onshore wind power.					
Position: Rural but close to future offshore wind power	Plot: 119 acres for whole site but high demands on plots	Power: Up to 5GW of future offshore wind + hydrogen potential	Ping : Limited but opportunity for future subsea links	Protection: No hazards observed in close proximity	Programme: Deep-water terminal under construction	Proposition: Potential Hyperscale / Cable Landing Station
TechRE Comments	The site offers significant potential for hyperscale use with an opportunity to develop a private wire connection to huge offshore wind power. There are other green options as well. Note, current development plots are currently allocated and other areas closeby may need to be explored.					





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IMAGES

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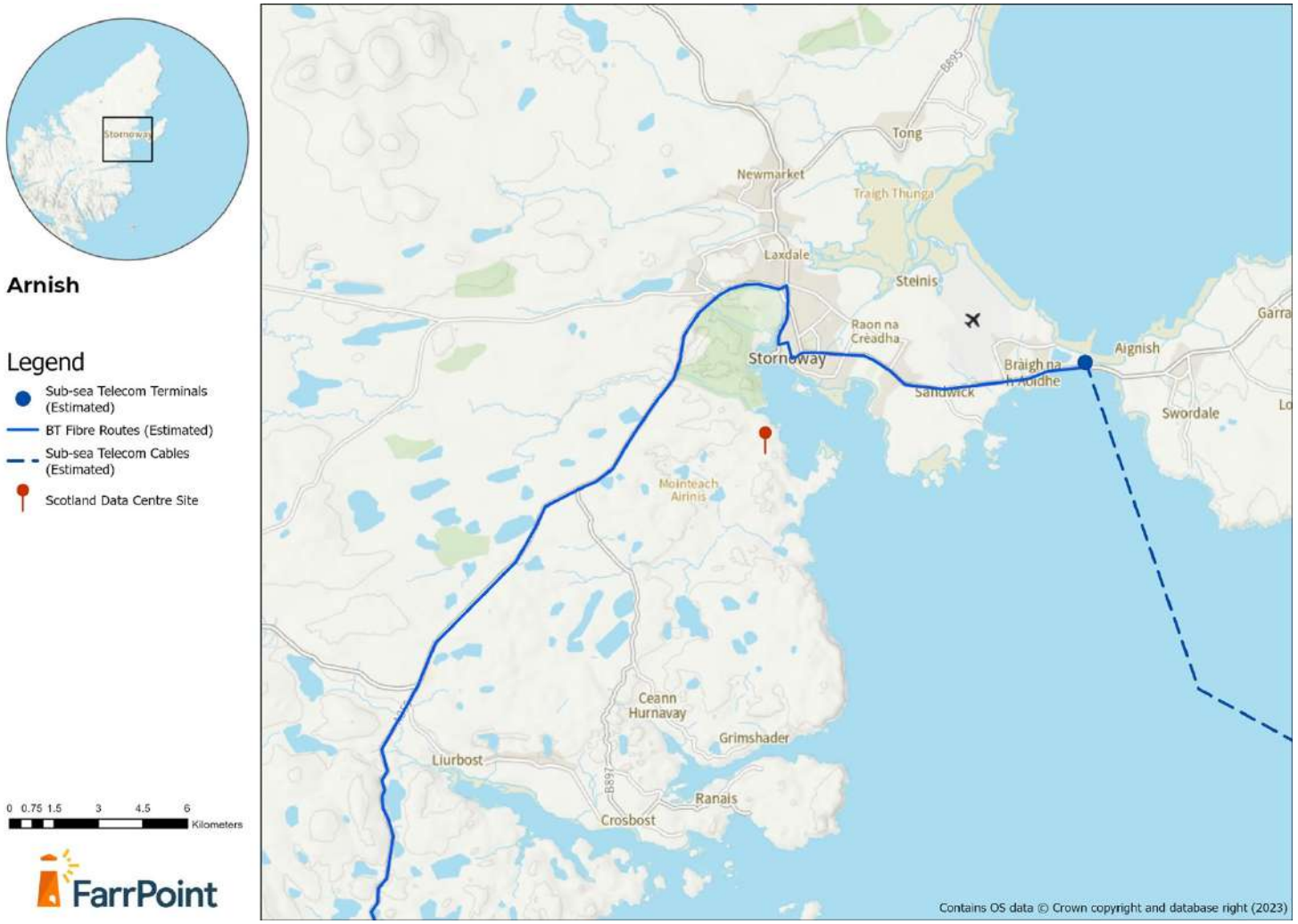

Notes

- Close to estimated Openreach fibre route
- Close to estimated subsea route
- There is an additional link off the island to the south which provides some resilience

Note: Fibre routes are deduced from data available in the public domain

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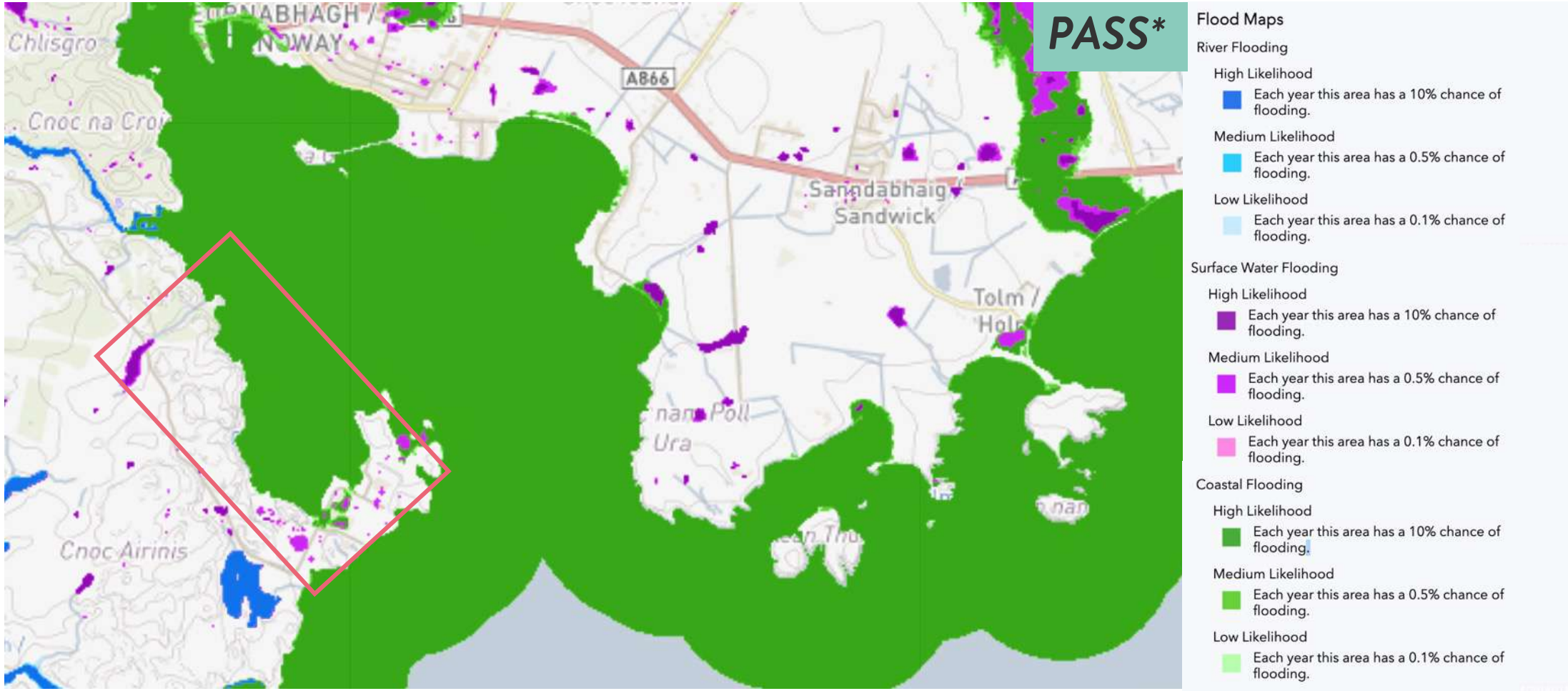
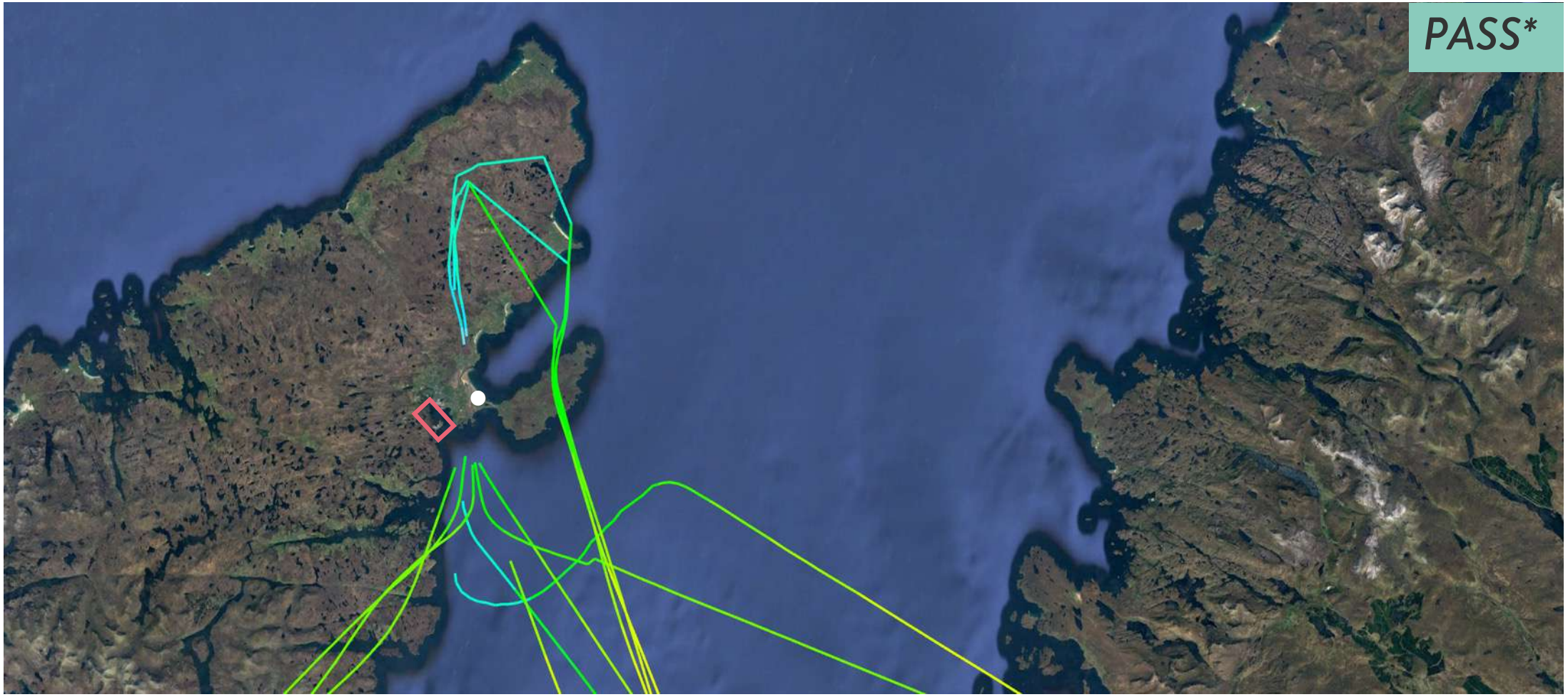
FLOOD RISK ASSESSMENT



*Subject to final site location - TechRE assessment

ARNISH

FLIGHT PATH ASSESSMENT



*TechRE assessment

ARNISH
WIND POWER

UP TO
5GW
OF GREEN POWER
FROM N2, N3 & N4

POTENTIAL FOR
DIRECT CABLE
LINK TO ARNISH

360MW
FROM 2 ONSHORE
WIND FARMS

ENERGY THROUGH
HYDROGEN
ELECTROLYSIS

*Note, information provided by Comhairle nan Eilean Siar

SHORTLIST

BLACKHILLOCK

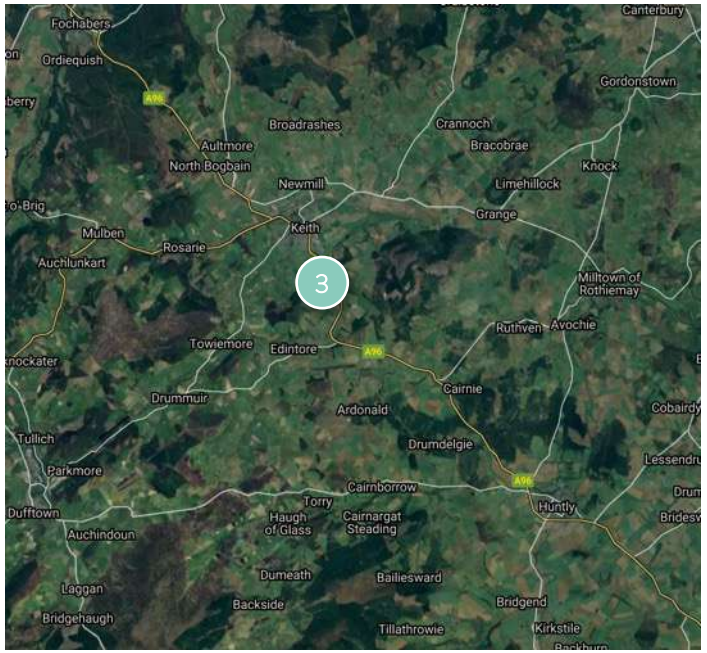
MORAY

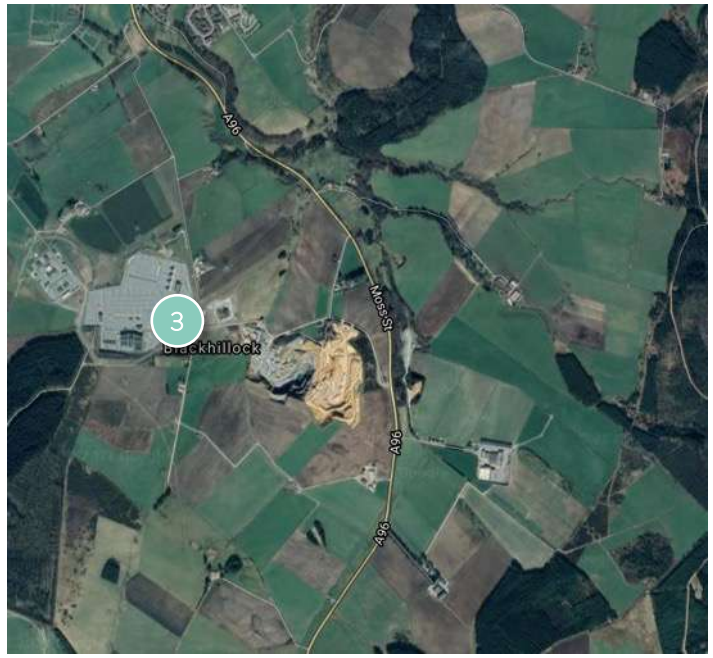
#SCOTLANDISNOW

SCOTLAND

BLACKHILLOCK
OVERVIEW

Site Overview	The site is located next to the largest substation in the UK and the second largest in Europe. Planned to be the major substation grid connection for renewable energy generated across northeast Scotland. Moray Council is currently commissioning a masterplan for the site amid continued development interest.					
Position: Rural but offers key access to green energy	Plot: 16 acres in private ownership	Power: 1.2GW capacity	Ping: Limited to Openreach & Neos	Protection: No hazards observed	Programme: Substation operational in 2019	Proposition: Potential hyperscale
TechRE Comments	A great site adjacent to major substation powered by plenty of renewables to support hyperscale build. Note, power is direct from grid rather than by private wire. Blackhillock is also a potential location for hydrogen production. However, additional terrestrial fibre will be needed to develop the site.					





BLACKHILLOCK
IMAGES

BLACKHILLOCK

FIBRE

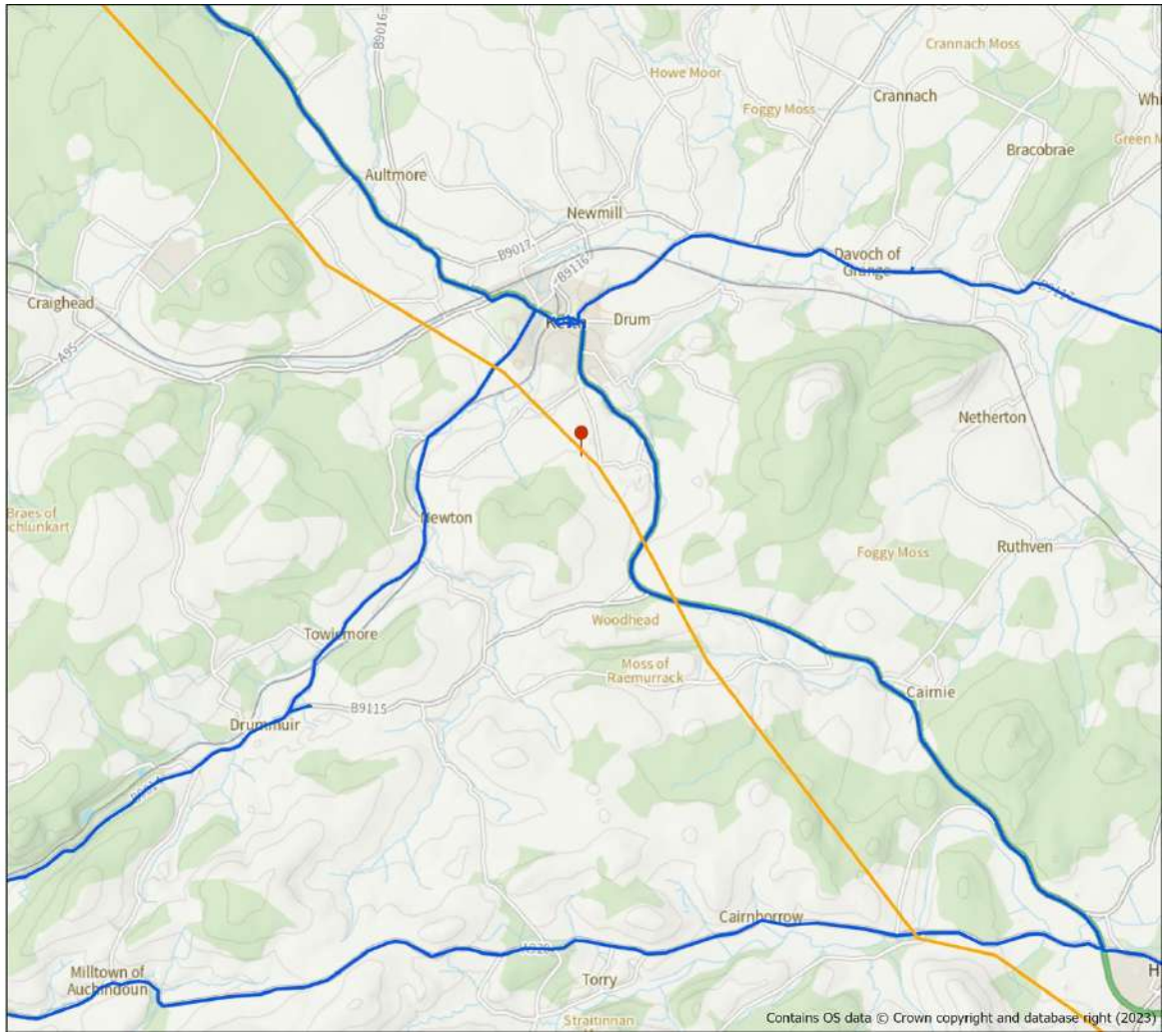
Blackhillock

Legend

- Neos Network (Estimated)
- BT Fibre Routes (Estimated)
- Scotland Data Centre Site

0 0.75 1.5 3 4.5 6 Kilometers

FarrPoint

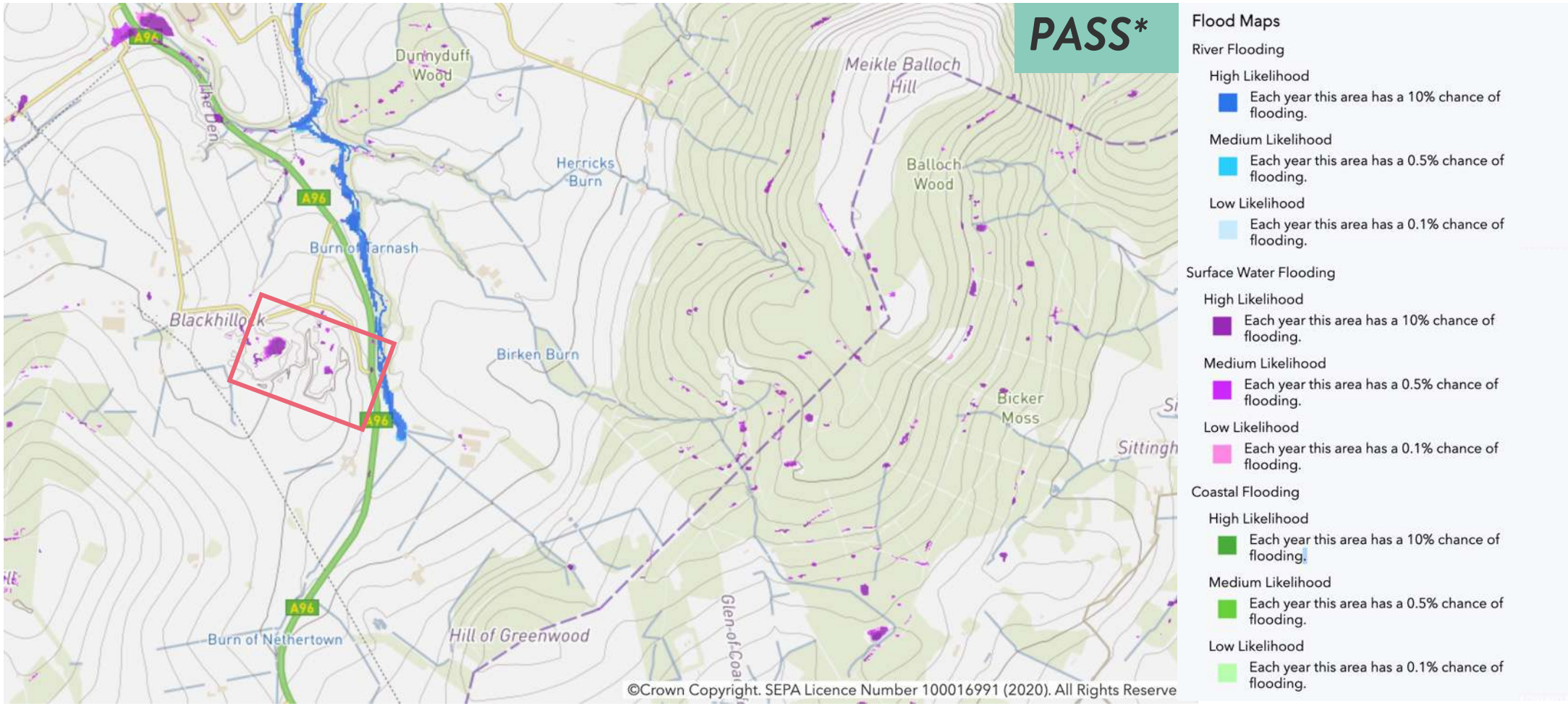


Notes

- Close to estimated Openreach fibre route
- Neos Network in the vicinity

Note: Fibre routes are deduced from data available in the public domain

BLACKHILLOCK
FLOOD RISK ASSESSMENT



*TechRE assessment

SHORTLIST

CHAPELCROSS

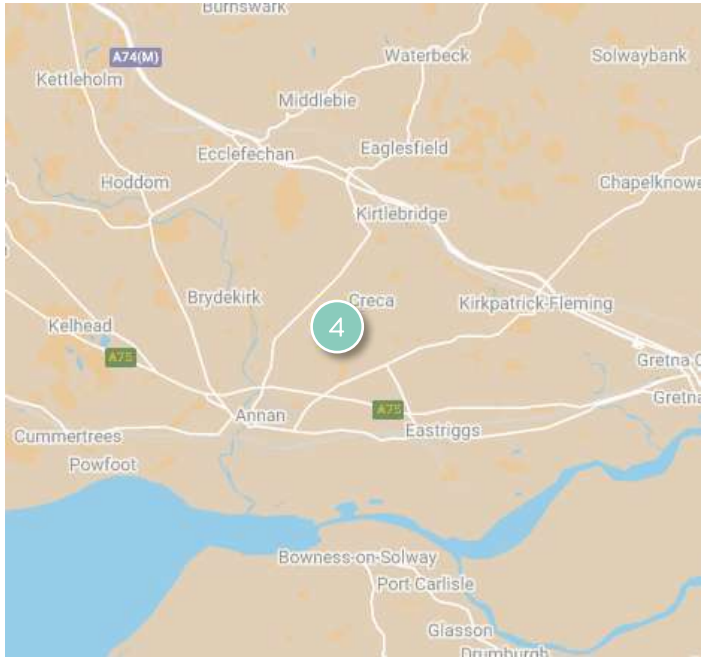
DUMFRIES & GALLOWAY

#SCOTLANDISNOW

SCOTLAND

CHAPELCROSS
OVERVIEW

Site Overview	An ex-nuclear power station, Chapelcross has significant grid connectivity, existing fibre connectivity, large amounts of land along with close proximity to large scale renewables. Chapelcross Power Station Redevelopment is included as a national development project in the National Planning Framework 4.					
Position: Rural location but close to major wind farms	Plot: 543 acres	Power: Abundant, up to 600MW planned from wind energy	Ping: Virgin Media, Openreach and Lumen. Zayo also closeby.	Protection: Hazardous waste risk needs assessment	Programme: Major upgrade planned in grid capacity in 2028.	Proposition: Hyperscale use
TechRE Comments	Chapelcross offers direct on-site access to the grid network but the site is also of interest because of its ability to receive power from the huge wind farms across Dumfries and Galloway. Also potential for new solar power (34MW consented on adjacent land plus other sites) together with other types of sustainable energy.					

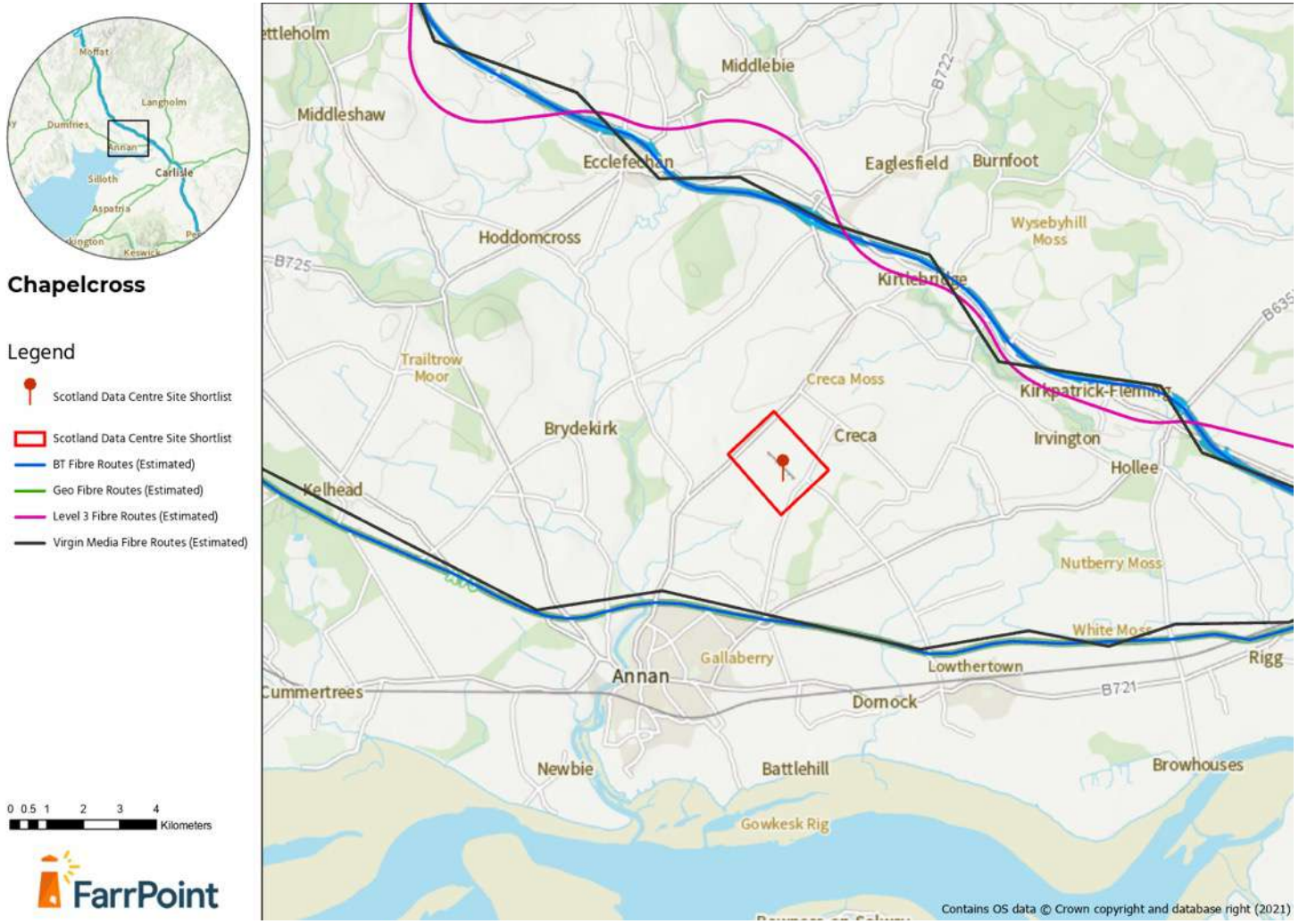


CHAPELCROSS

IMAGES

CHAPELCROSS

FIBRE



Notes

Multiple operators in the region:

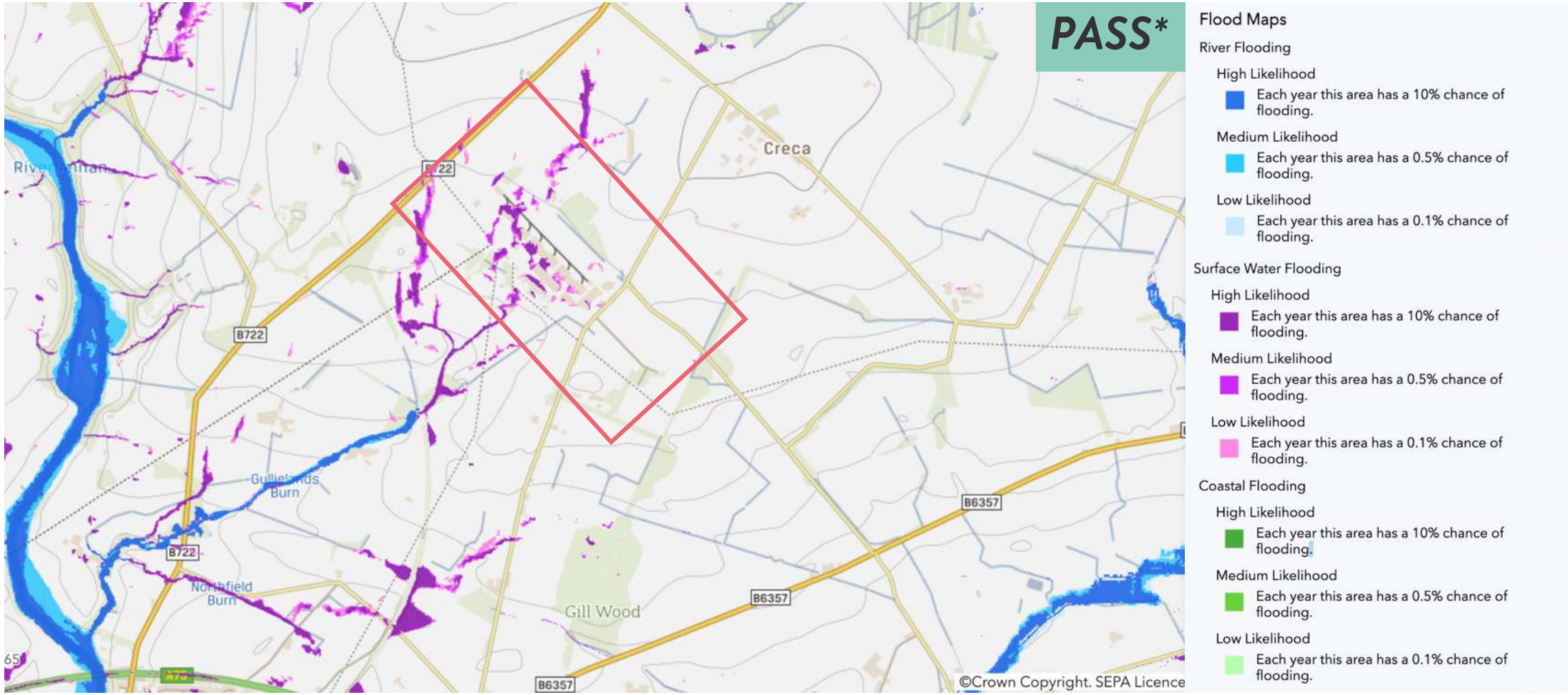
- Virgin Media
- Openreach
- Level 3 (now Lumen)

Nearby PoPs:

- BT OHP/Ethernet Nodes in Longtown, Dumfries, Carlisle

Note: Fibre routes are deduced from data available in the public domain.

CHAPELCROSS
FLOOD RISK ASSESSMENT



*TechRE assessment

SHORTLIST

COCKENZIE

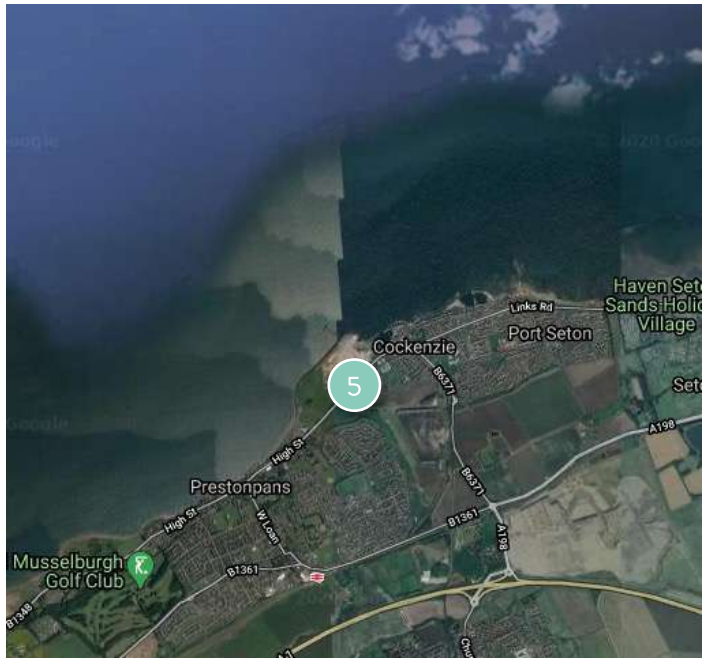
POWER STATION, EAST LOTHIAN

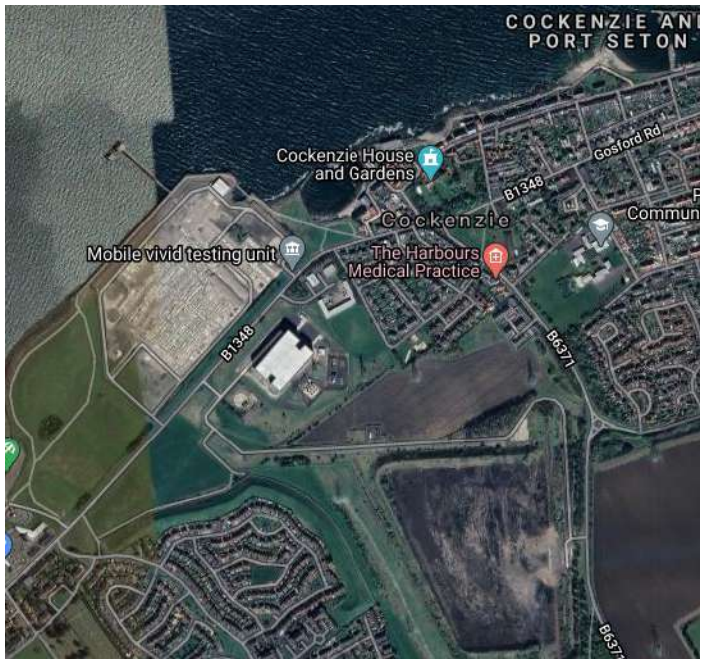
#SCOTLANDISNOW

SCOTLAND

COCKENZIE POWER STATION
OVERVIEW

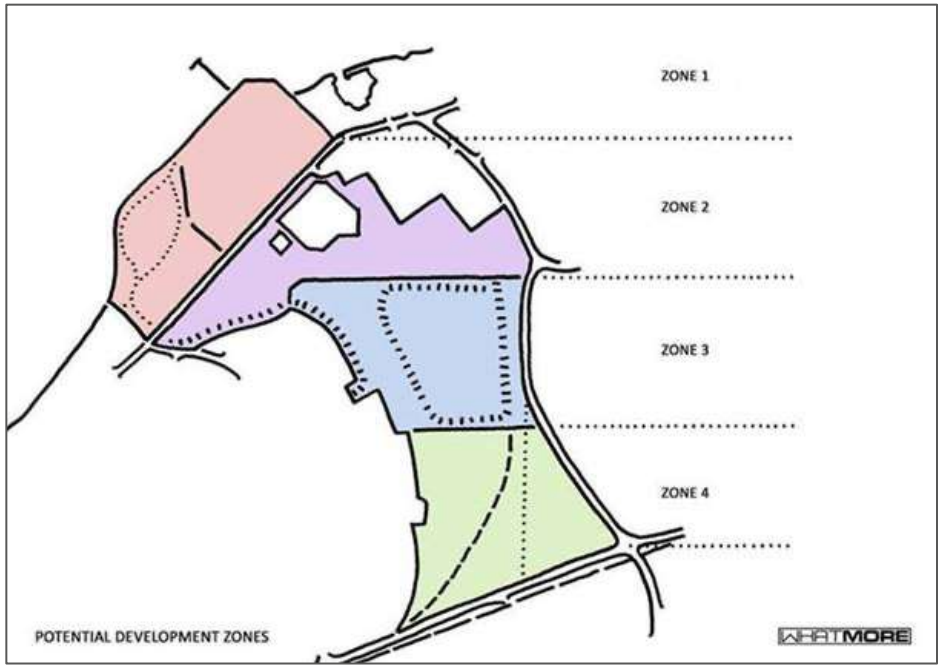
Site Overview	A former coal-fired power plant with a significant substation on site. The site is intended to be the recipient of offshore wind energy from Inch Cape Offshore Windfarm. It is owned by East Lothian Council & a previous masterplan has been prepared dividing the area into four zones with data centre use potentially suitable in Zones 1 or 3.					
Position: Close proximity to Edinburgh & the A1	Plot: Zone 3 (the coal store) is approx. 74 acres	Power: 1 GW of renewable energy when the substation in Zone 1 is complete	Ping: Multiple carriers nearby	Protection: Zone 1 (coast) has some areas subject to flood risk	Programme: Zone 1 substation expected by 2024/2025	Proposition: Potential hyperscale use or urban colocation
TechRE Comments	An excellent opportunity to marry huge renewables with a large-scale site. There are multiple fibre carriers running close to the site into Edinburgh offering a large population nearby and a data centre customer base plus the site has the geographical advantage of potentially attracting subsea connectivity from mainland Europe.					





COCKENZIE POWER STATION

IMAGES



COCKENZIE POWER STATION

FIBRE

Notes

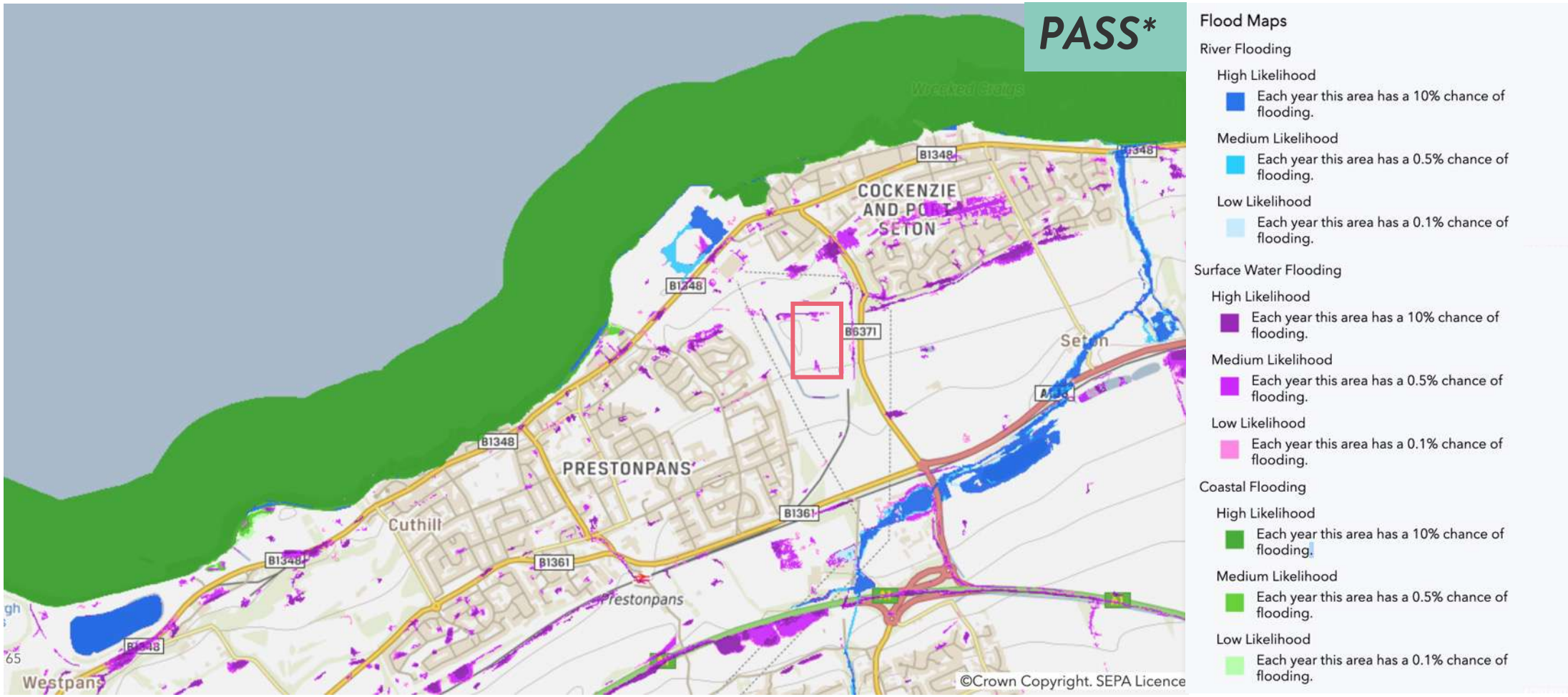
- Openreach fibre and Lumen fibre expected in vicinity
- Virgin Media also in the vicinity

Nearby PoPs:

- BT OHP/Ethernet Node in Tranent

Note: Fibre routes are deduced from data available in the public domain.

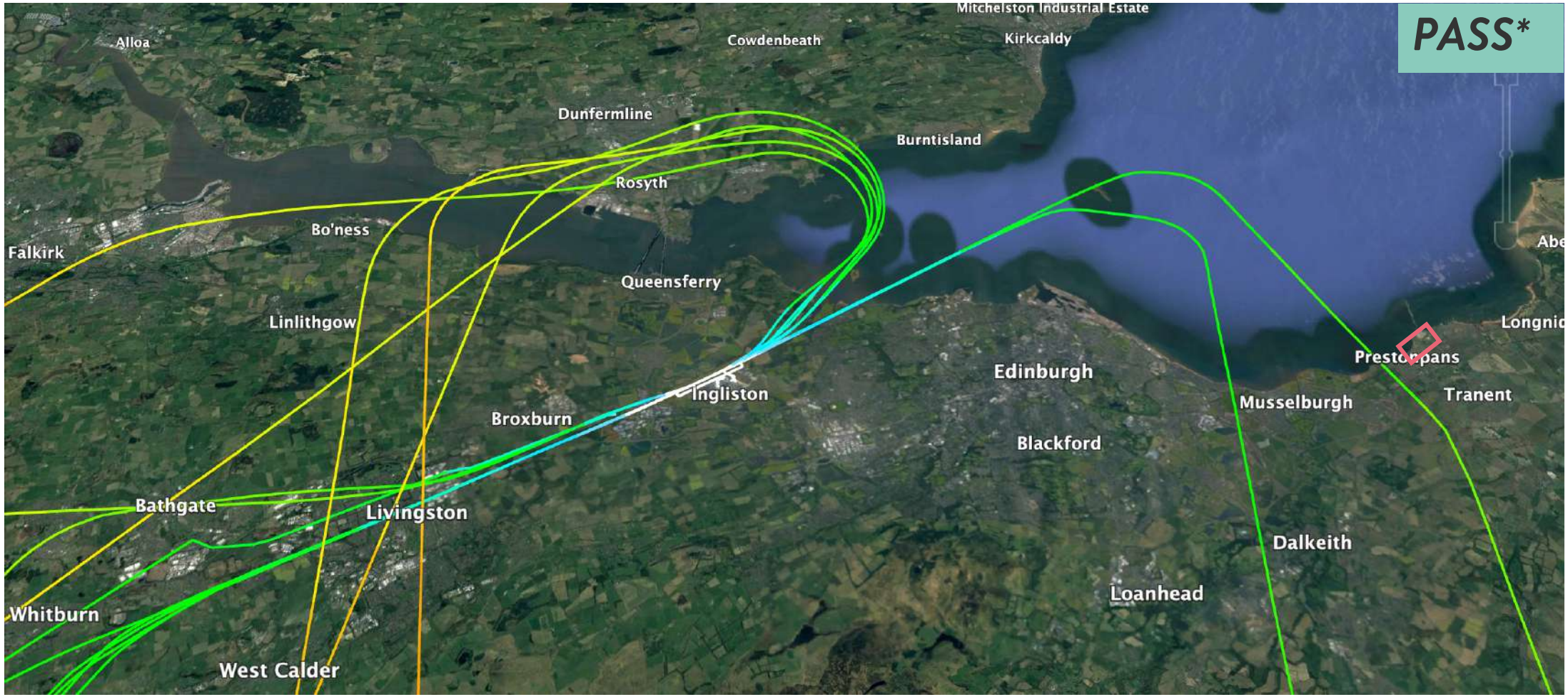
COCKENZIE POWER STATION
FLOOD RISK ASSESSMENT



*Subject to final site location - TechRE assessment

COCKENZIE POWER STATION

FLIGHT PATH ASSESSMENT



*Note, some flights observed nearby but >5,000 ft and not on the main path -TechRE assessment

COCKENZIE POWER STATION

POWER

15 KM
FROM THE
ANGUS
COASTLINE

UP TO
1 GW
OF CLEAN
ELECTRICITY

UP TO
72
TURBINES

150 KM²
FOOTPRINT
ENOUGH TO COVER
21,000
FOOTBALL
PITCHES

Inch Cape is located 15km off the Angus Coast in the East of Scotland

*Note, information provided by East Lothian Council

SHORTLIST

DOUNREAY

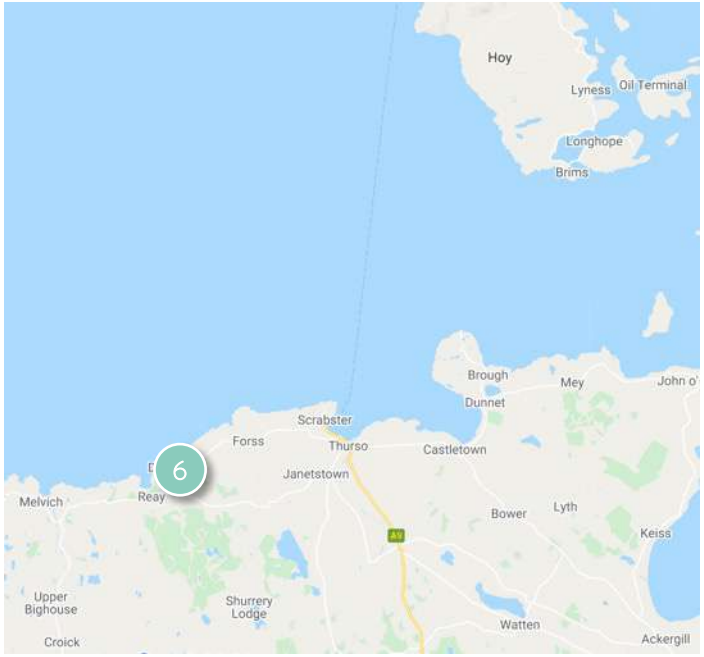
HIGHLAND

#SCOTLANDISNOW

SCOTLAND

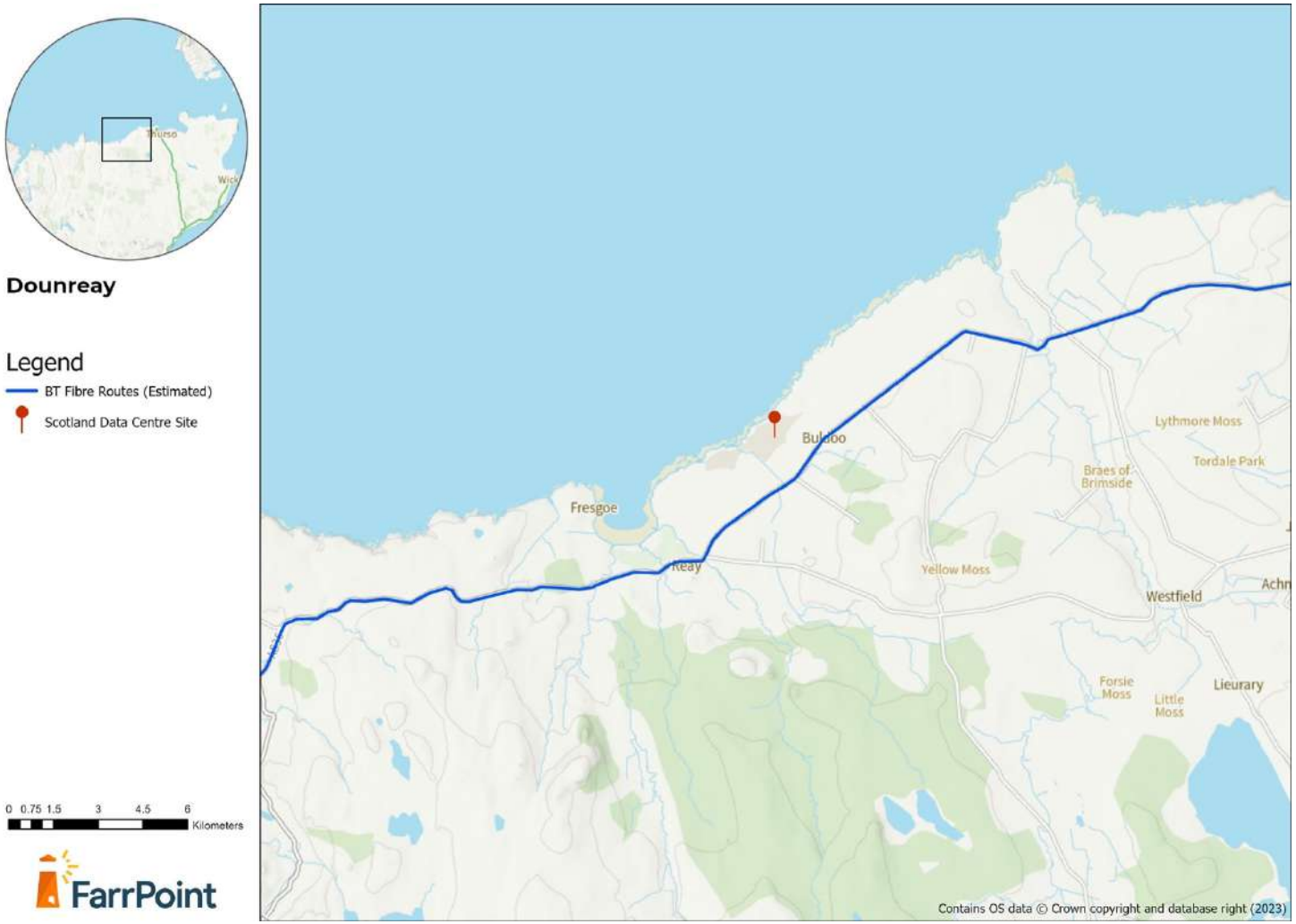
DOUNREAY
OVERVIEW

Site Overview	An ex-nuclear power plant currently being decommissioned. Offers abundant clean and green power options with subsea cable links to Farice (providing a direct connection to London) and potentially AE-5 in the future.					
Position: Rural location but close to offshore wind farms	Plot: 148 acres	Power: 2GW offshore wind farms planned west of Orkney	Ping: Limited but Farice-1 subsea cable lands at Dunnet Bay	Protection: Hazardous waste risk needs assessment	Programme: 100MW floating wind farm 8km away expected 2026	Proposition: Hyperscale / Cable Landing Station
TechRE Comments	Dounreay could potentially serve as a superconnector for renewable power from future fixed & floating wind farms in the Outer Hebrides, Orkney & Shetlands creating a major renewables hub. Has government and Nuclear Decommissioning Agency support for re-use. Upgrades in on site grid capacity currently being studied.					



DOUNREAY
IMAGES

DOUNREAY
FIBRE

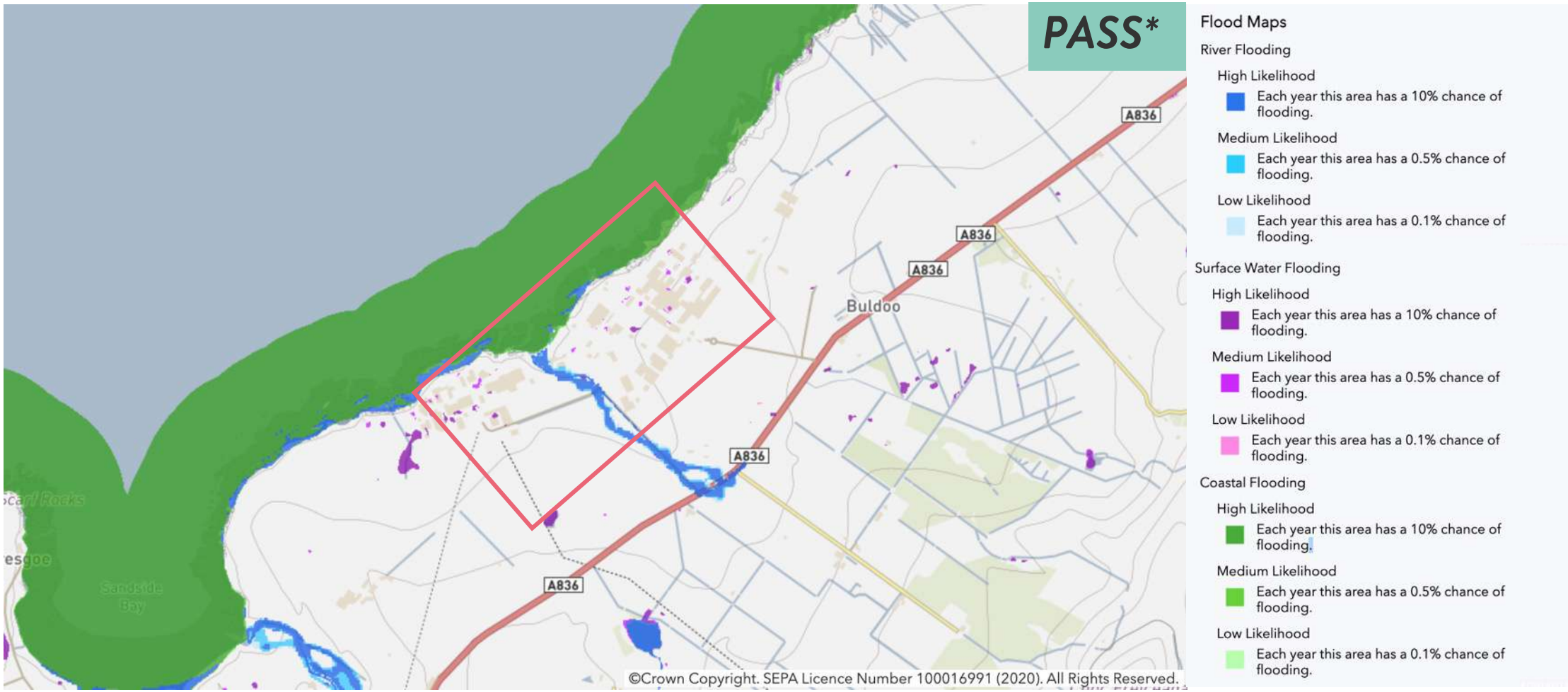


Notes

- Close to estimated Openreach fibre route

Note: Fibre routes are deduced from data available in the public domain

DOUNREAY
FLOOD RISK ASSESSMENT



*TechRE assessment

SHORTLIST

FEARN AIRFIELD

HIGHLAND

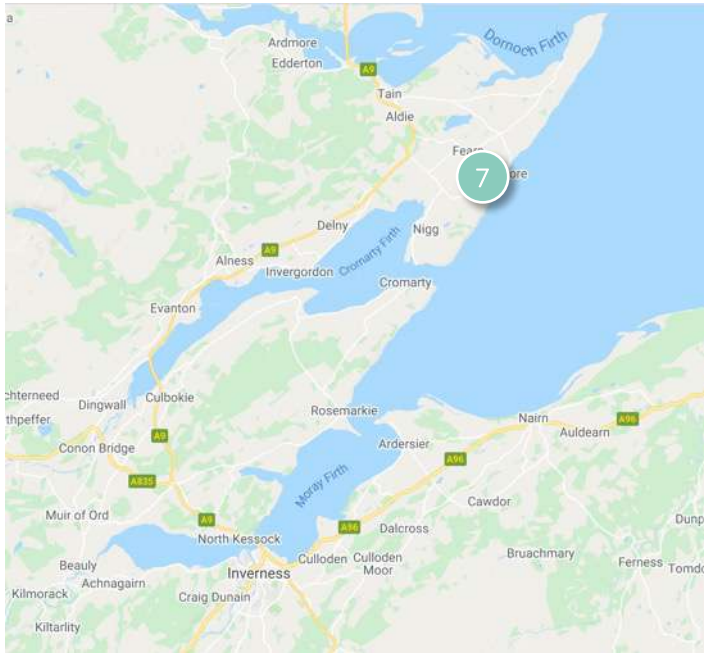
#SCOTLANDISNOW

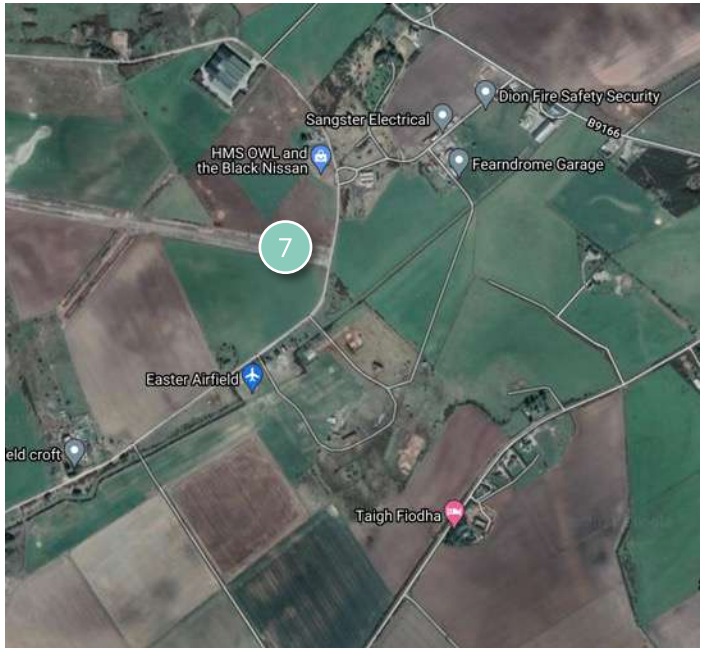
SCOTLAND

FEARN AIRFIELD & SURROUNDS

OVERVIEW

Site Overview	A large ex RAF airfield with significant agricultural buildings on part of the site. Located within the Inner Moray Firth Local Development Plan. In Nov 2022, Acorn Bioenergy have submitted plans for a biogas plant at Fearn Airfield taking up 18 acres but plenty of land still available.					
Position: Very rural area but close to wind farms	Plot: 310 acres in private ownership (Fearn Farm)	Power: Close to offshore wind farms to the NE. Biogas plant in planning.	Ping: Limited to Openreach	Protection: Parts of the site subject to flood risk but plenty of land	Programme: Vacant site but additional infrastructure needed	Proposition: Significant renewables provides hyperscale opportunity
TechRE Comments	A site with plenty of scale to serve as a hyperscale campus with major offshore wind farms close by. New data centre facilities would be compatible with the visual impact of the existing farm buildings. Note, though more terrestrial fibre will be needed to develop the site.					



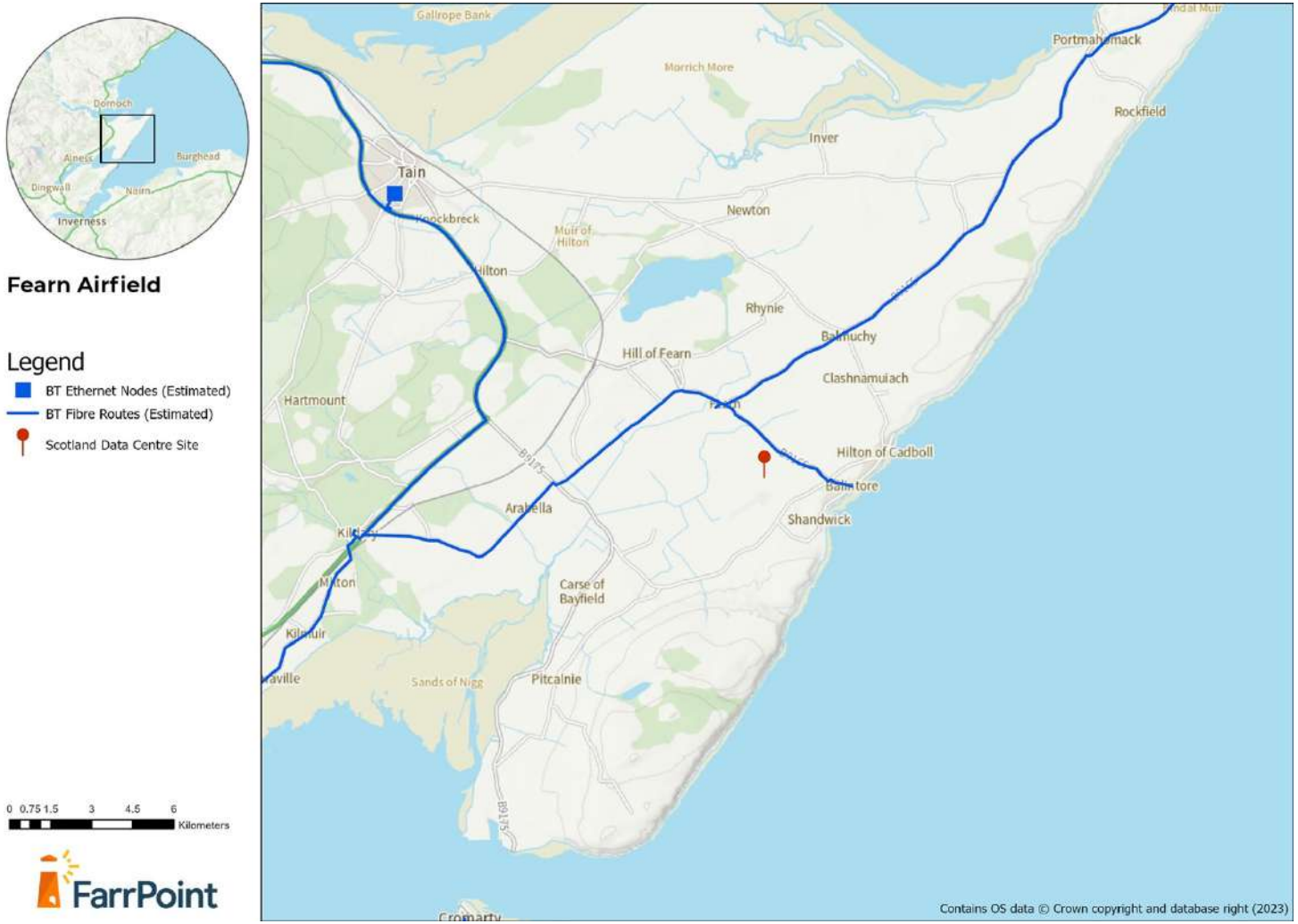


FEARN AIRFIELD & SURROUNDS

IMAGES

FEARN AIRFIELD & SURROUNDS

FIBRE



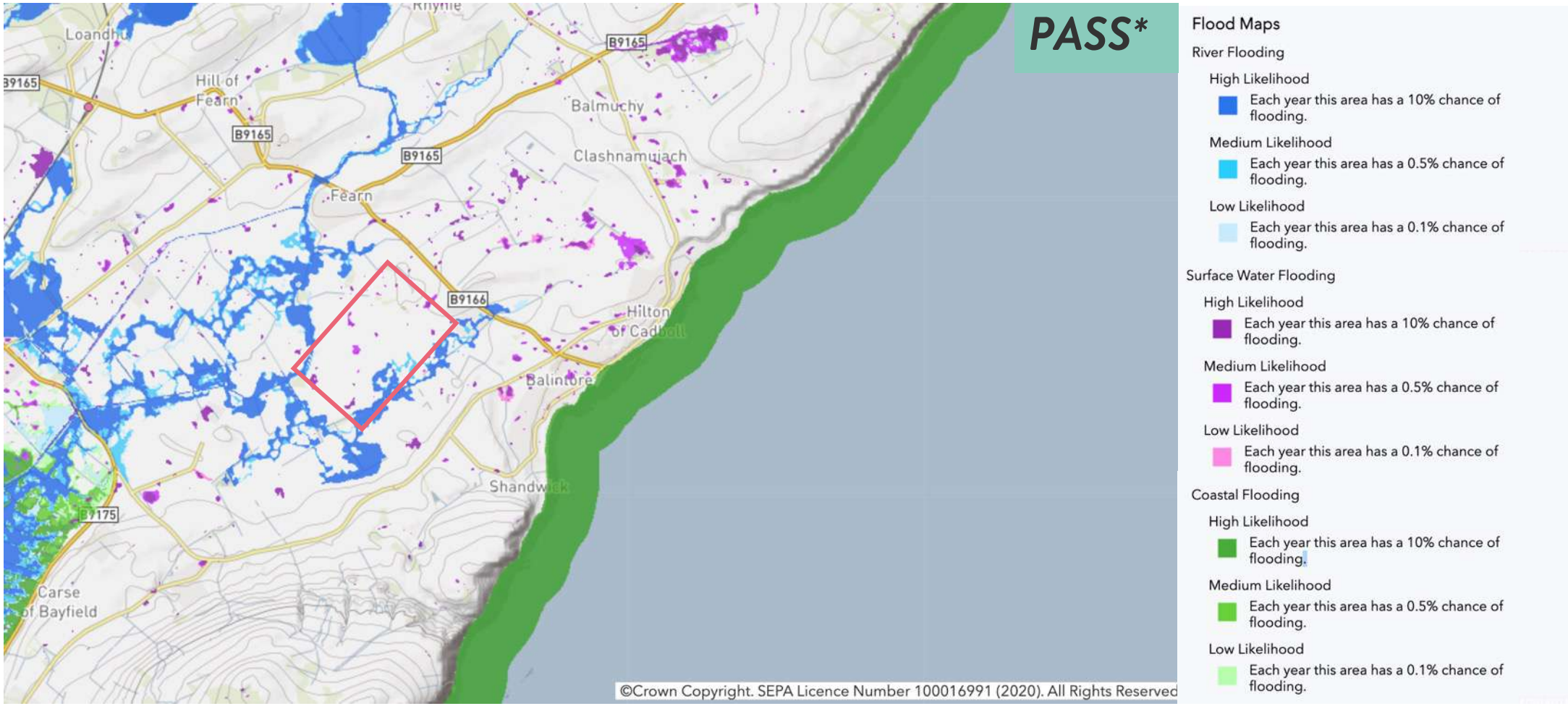
Notes

- Close to estimated Openreach fibre route

Note: Fibre routes are deduced from data available in the public domain

FEARN AIRFIELD & SURROUNDS

FLOOD RISK ASSESSMENT



*Subject to further due diligence - TechRE assessment

SHORTLIST

i3, IRVINE

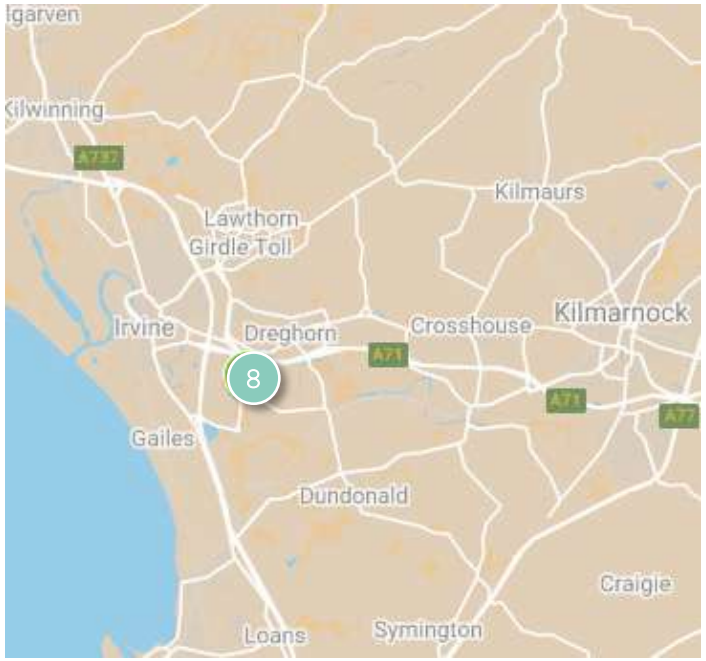
NORTH AYRSHIRE

#SCOTLANDISNOW

SCOTLAND

i3, IRVINE
OVERVIEW

Site Overview	A large business park with a mixture of greenfield and industrial units available for development, lease or purchase. Renewable energy options are being explored for the site by the Council specifically focusing on solar, wind and battery storage.					
Position: SW of Glasgow > 250,000 pop. within 40km	Plot: 222 acres	Power: Renewable energy options are under consideration for this site	Ping: Openreach and Virgin Media in proximity	Protection: Some areas on the edge in a flood zone	Programme: A no. of industrial units could work for data centre use in short term	Proposition: Potential urban colocation
TechRE Comments	The key advantage i3 offers is a quick to market option for data centres looking to serve the Ayrshire/Wider Glasgow area. The area offers a range of existing buildings & land plots. A feasibility study by the Council will look at the potential for a 10MW solar farm & 12 MW wind turbines including the option of private wire connection.					



i3, IRVINE
IMAGES

i3, IRVINE
FIBRE

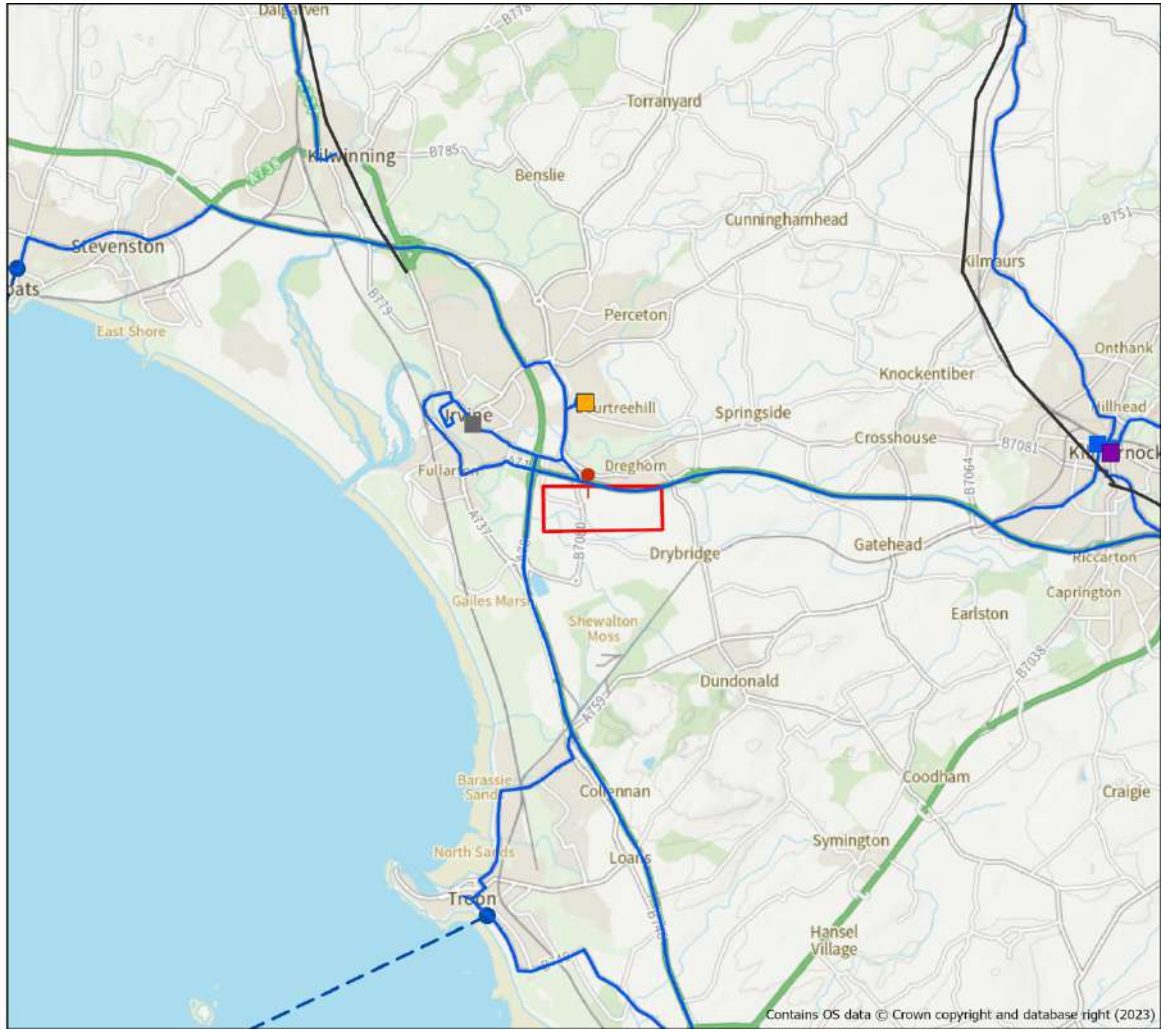
i3 Business Park

Legend

- Virgin Media PoP Sites (Estimated)
- Vodafone PoPs (Estimated)
- Neos PoPs (Estimated)
- Virgin Media Fibre Network (Estimated)
- BT Ethernet Nodes (Estimated)
- BT Fibre Routes (Estimated)
- Sub-sea Telecom Terminals (Estimated)
- Sub-sea Telecom Cables (Estimated)
- Scotland Data Centre Site Shortlist
- Scotland Data Centre Site Shortlist

0 0.75 1.5 3 4.5 6 Kilometers

FarrPoint



Notes

- Openreach and Virgin Media fibre in the vicinity

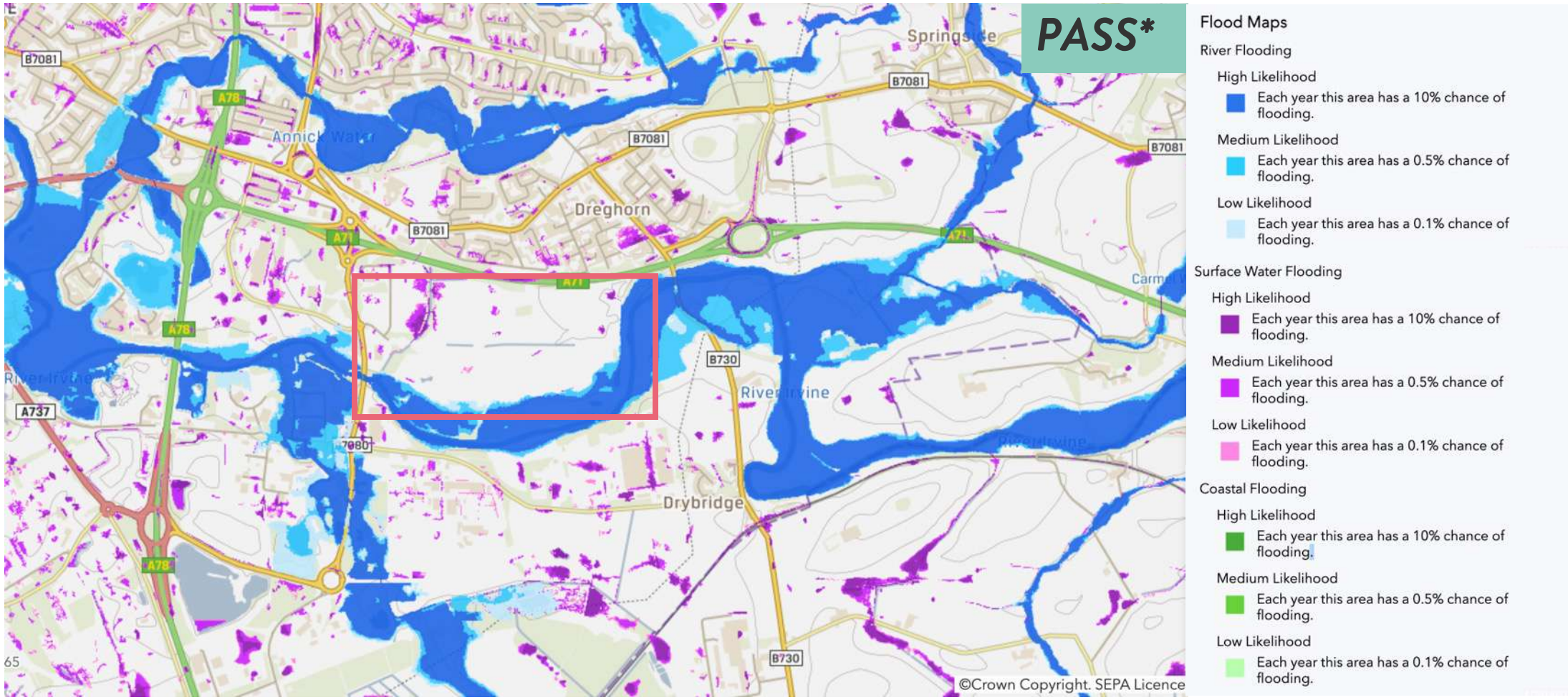
Nearby PoPs:

- BT OHP/Ethernet Node in Irvine
- Virgin Media and Neos have PoPs in the vicinity
- Vodafone has PoPs in Kilmarnock

Note: Fibre routes are deduced from data available in the public domain.

i3, IRVINE

FLOOD RISK ASSESSMENT



*Subject to further due diligence -TechRE assessment

i3, IRVINE

FLIGHT PATH ASSESSMENT

*TechRE assessment

SHORTLIST

MACHRIHANISH

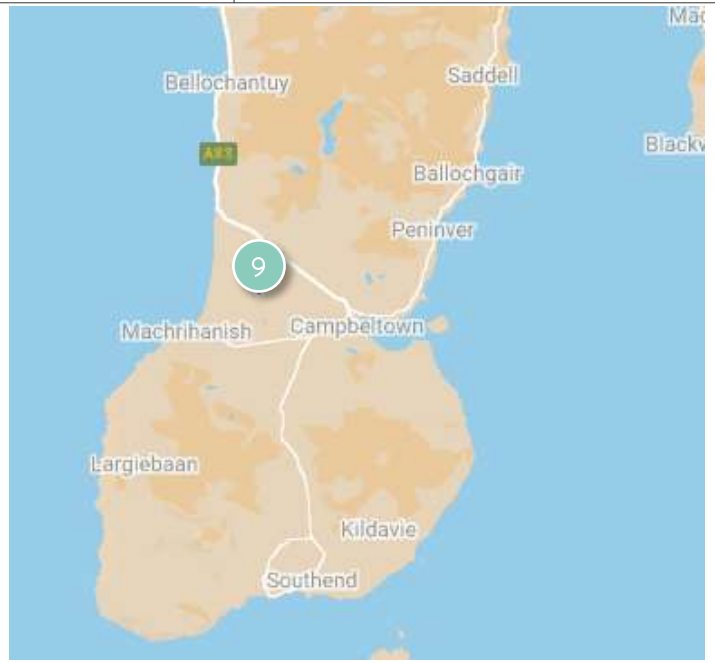
CAMPBELTOWN, ARGYLI & BUTE

#SCOTLANDISNOW

SCOTLAND

MACHRIHANISH
OVERVIEW

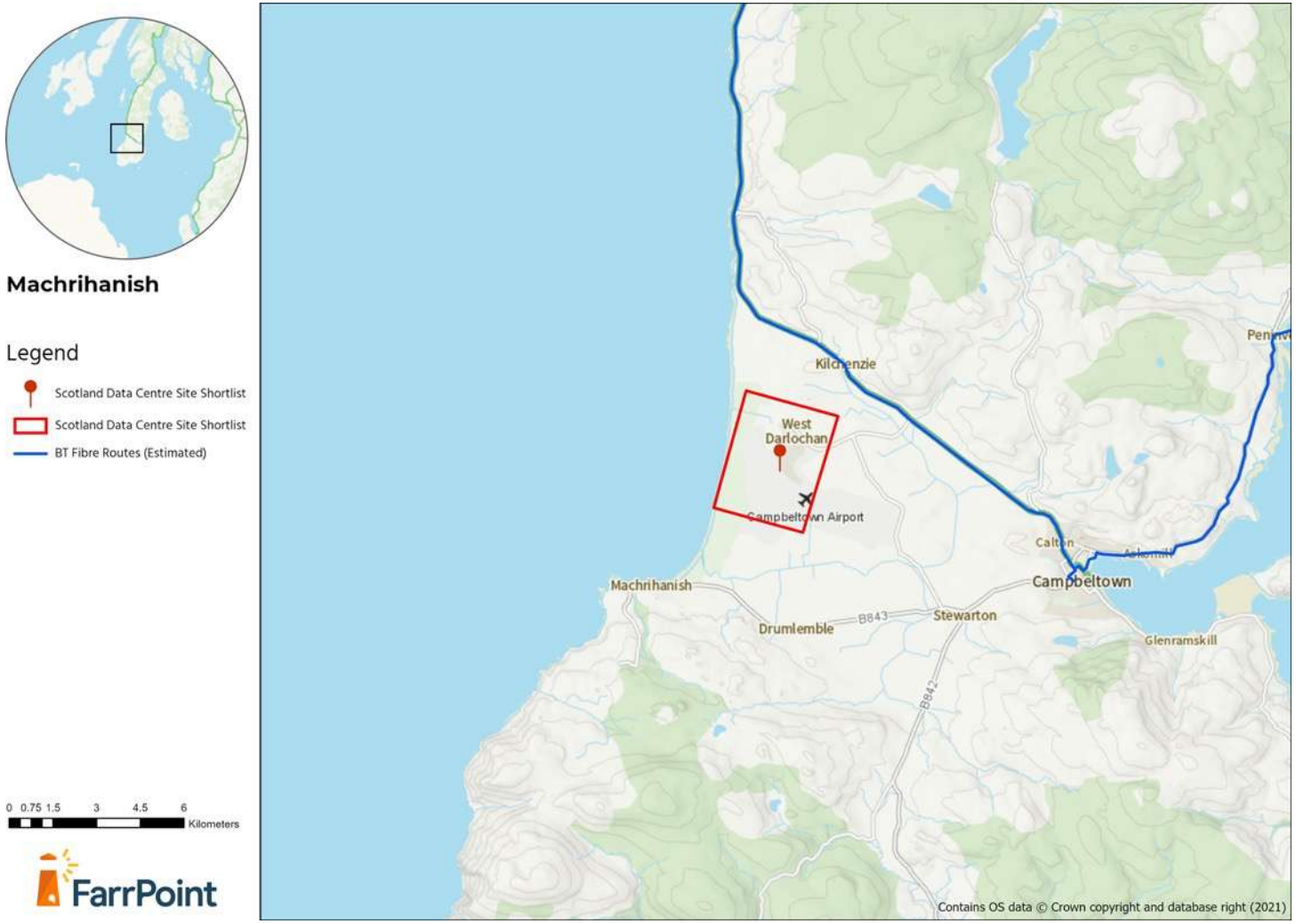
Site Overview	An ex-RAF base, Machrihanish currently hosts Campbeltown Airport to one section of the site, along with a large community-owned business park. The site has a mixture of industrial units, military grade bunkers and greenfield sites. The airbase is owned by the Machrihanish Airbase Community Company (MACC).					
Position: Rural location but potential as a subsea landing pt	Plot: 1,000 Acres	Power: Currently 4MW but could be increased. Solar and wind farm opportunities	Ping: Limited to Openreach	Protection: Nearby airport but only for infrequent light aircraft	Programme: MACC active in promoting growth in the area	Proposition: Hyperscale/Cable Landing Station
TechRE Comments	Machrihanish is of interest due to its proximity to Port Rush & Killala, which could offer a new subsea connection to Ireland & the USA and the site already has wayleaves to the beach to bring cables onto the site. Amazon has recently completed a 50MW wind farm close by for their own use and there are three 50MW+ windfarms within 5 miles. There is also a solar farm on site with room for expansion (up to 77MW). More terrestrial fibre is needed though.					



MACHRIHANISH
IMAGES

MACHRIHANISH

FIBRE



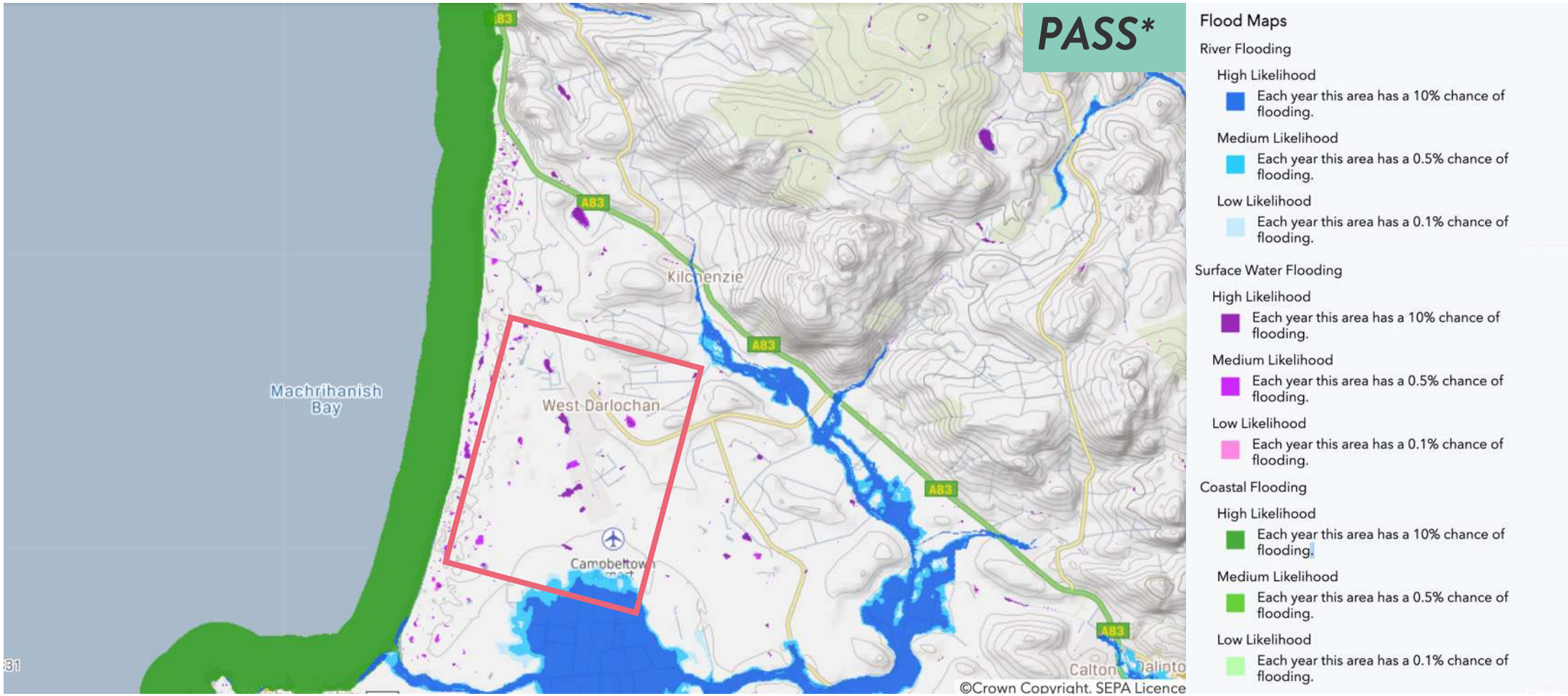
Notes

- Openreach fibre in the vicinity

No known nearby PoPs

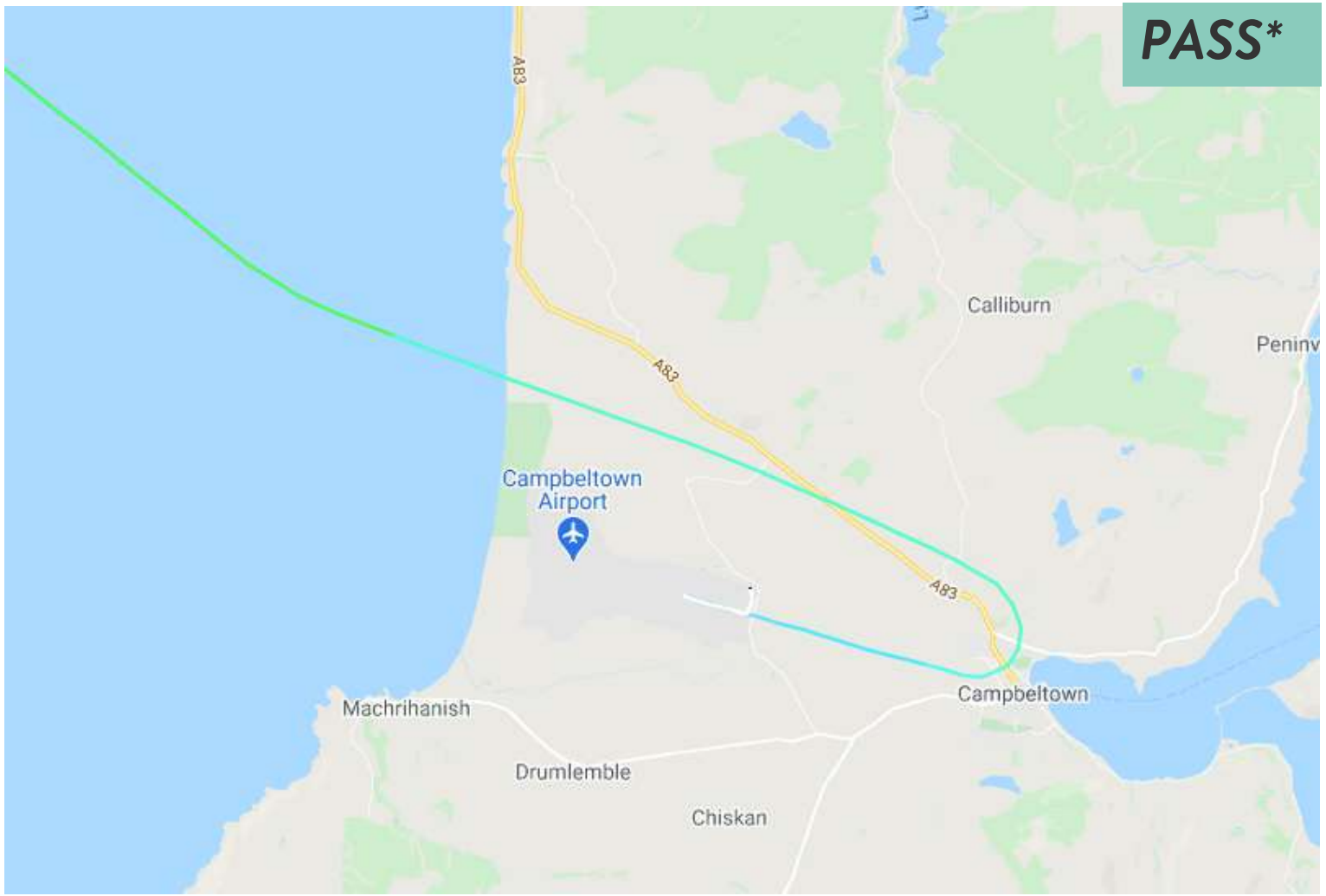
Note: Fibre routes are deduced from data available in the public domain.

MACHRIHANISH
FLOOD RISK ASSESSMENT



*Note that there are some flood zones to the south of the Campbeltown runway but the site is assessed as a pass as there is plenty of remaining land – TechRE assessment.

MACHRIHANISH
FLIGHT PATHS



* Note, a typical departure for Logan Air flight LM443, the only scheduled flight between Glasgow and Machrihanish. The flight is served by a light aircraft which only utilises a portion of the established runway.

Flight paths may vary, although flight data for this airport is difficult to report (TechRE assessment).

SHORTLIST

MEYGEN

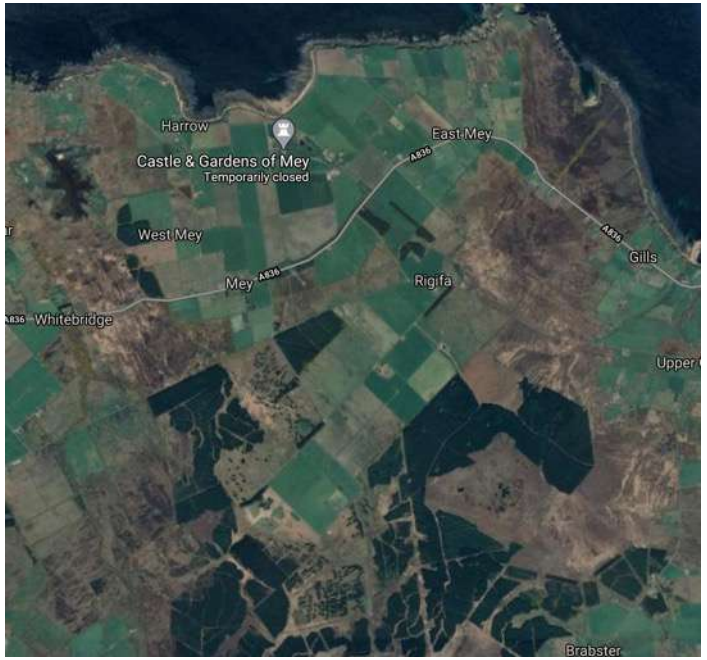
CAITHNESS, HIGHLAND

#SCOTLANDISNOW

SCOTLAND

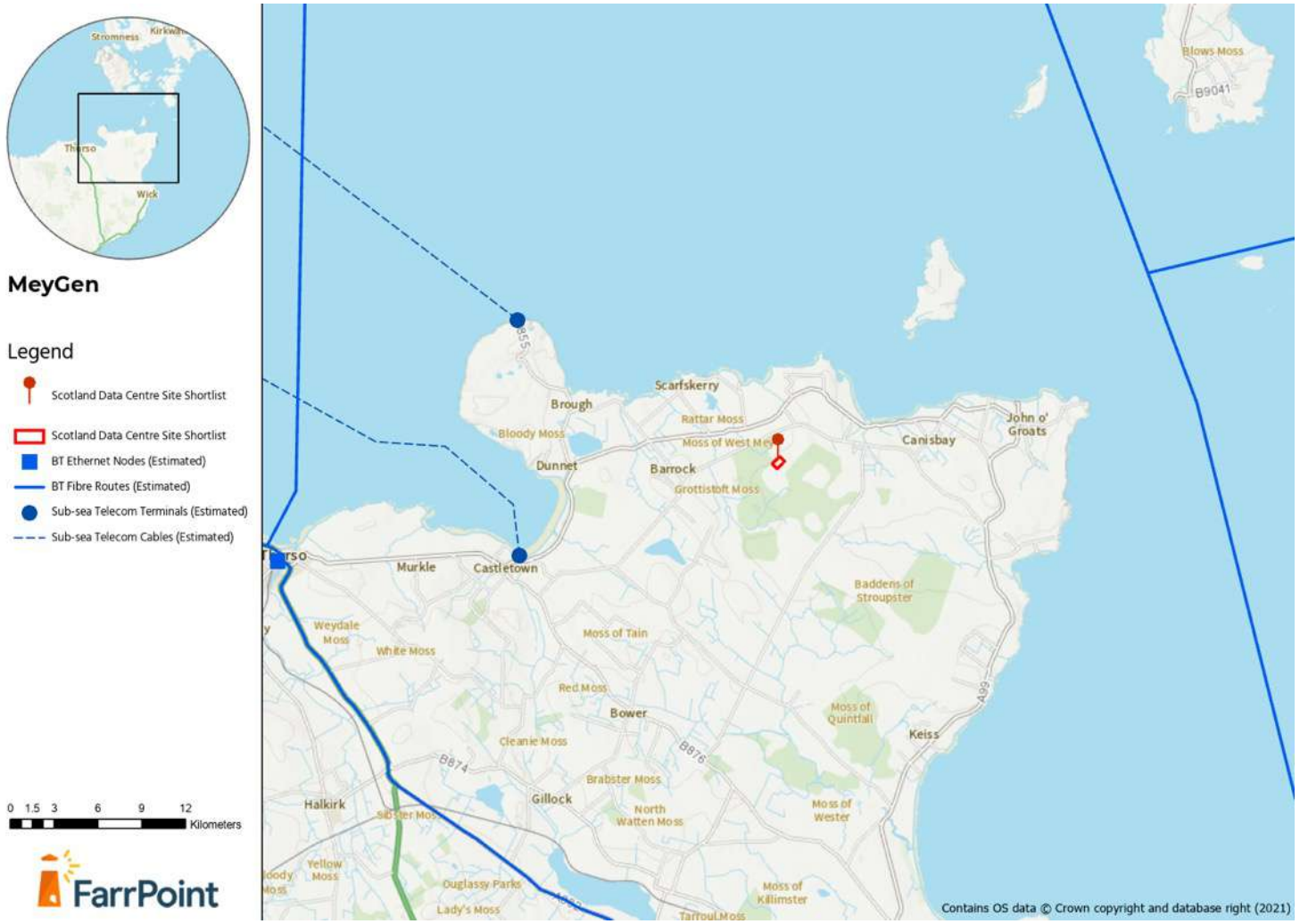
MEYGEN
OVERVIEW

Site Overview	MeyGen data centre is a data centre development scheme promoted by Simec Atlantis Energy Ltd (SAE). Currently a greenfield site, MeyGen data centre is being developed to utilise more reliable, predictable power from tidal generation.					
Position: Rural location but potential for subsea landing pt	Plot: Approx. 20+ Acres	Power: Potential for 398 MW of tidal power plus wind & battery storage	Ping: Openreach, more carriers in discussion	Protection: No hazards observed	Programme: Phase 2 (28MW) is targeted for 2027	Proposition: Hyperscale/Cable landing station
TechRE Comments	The MeyGen project is the largest planned tidal stream project in the world. The project is split into four phases. Phase 1 (6MW) is operational. A total of 86MW of tidal power has consent and a further 312MW is in planning. In addition, a 237MW grid connection has been secured for 2026/27 with connections to 2 windfarms.					



MEYGEN
IMAGES

MEYGEN
FIBRE



Notes

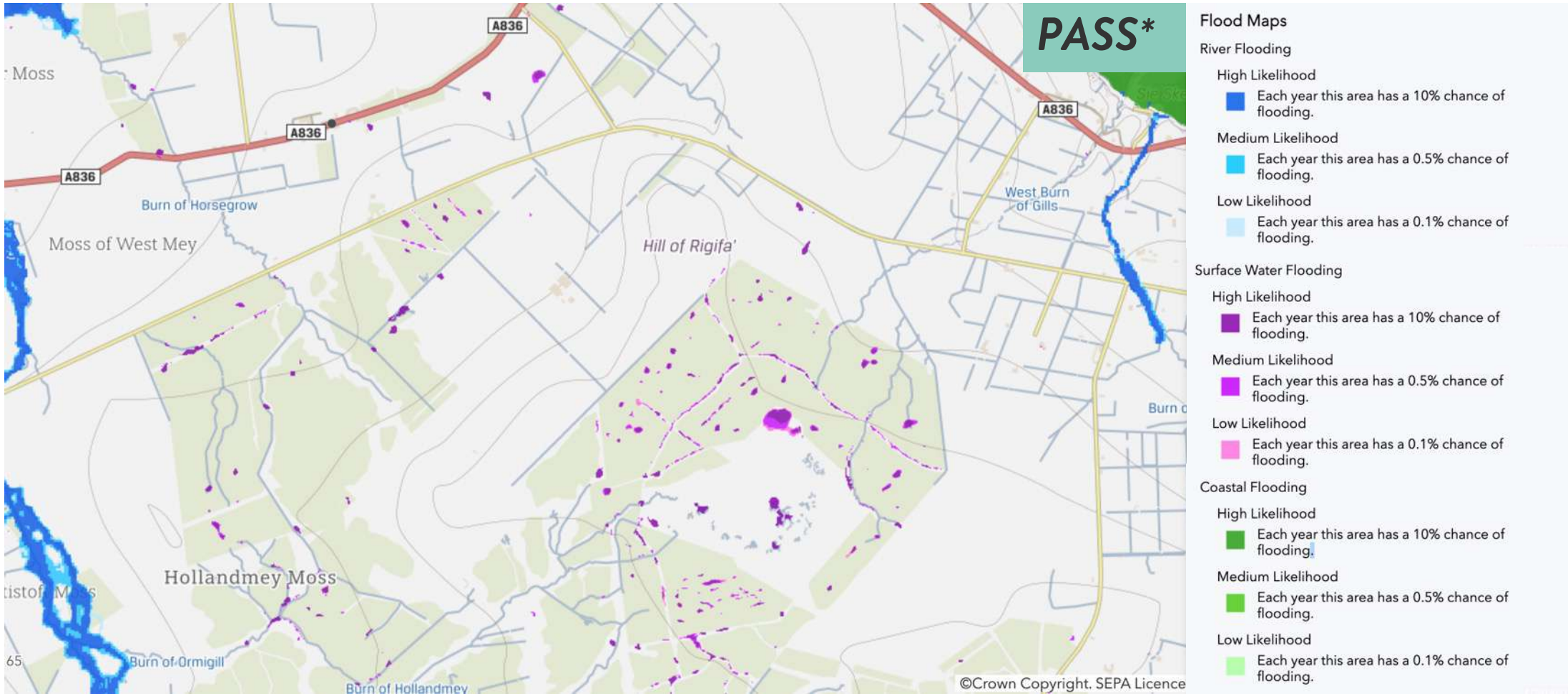
- Close to Farice-1 subsea route and expected subsea route to Orkney

Nearby PoPs:

- BT OHP/Ethernet Node in Thurso

Note: Fibre routes are deduced from data available in the public domain.

MEYGEN
FLOOD RISK ASSESSMENT



*TechRE assessment

SHORTLIST

MICHELIN SCOTLAND INNOVATION PARC

#SCOTLANDISNOW

SCOTLAND

MICHELIN SCOTLAND INNOVATION PARC

OVERVIEW

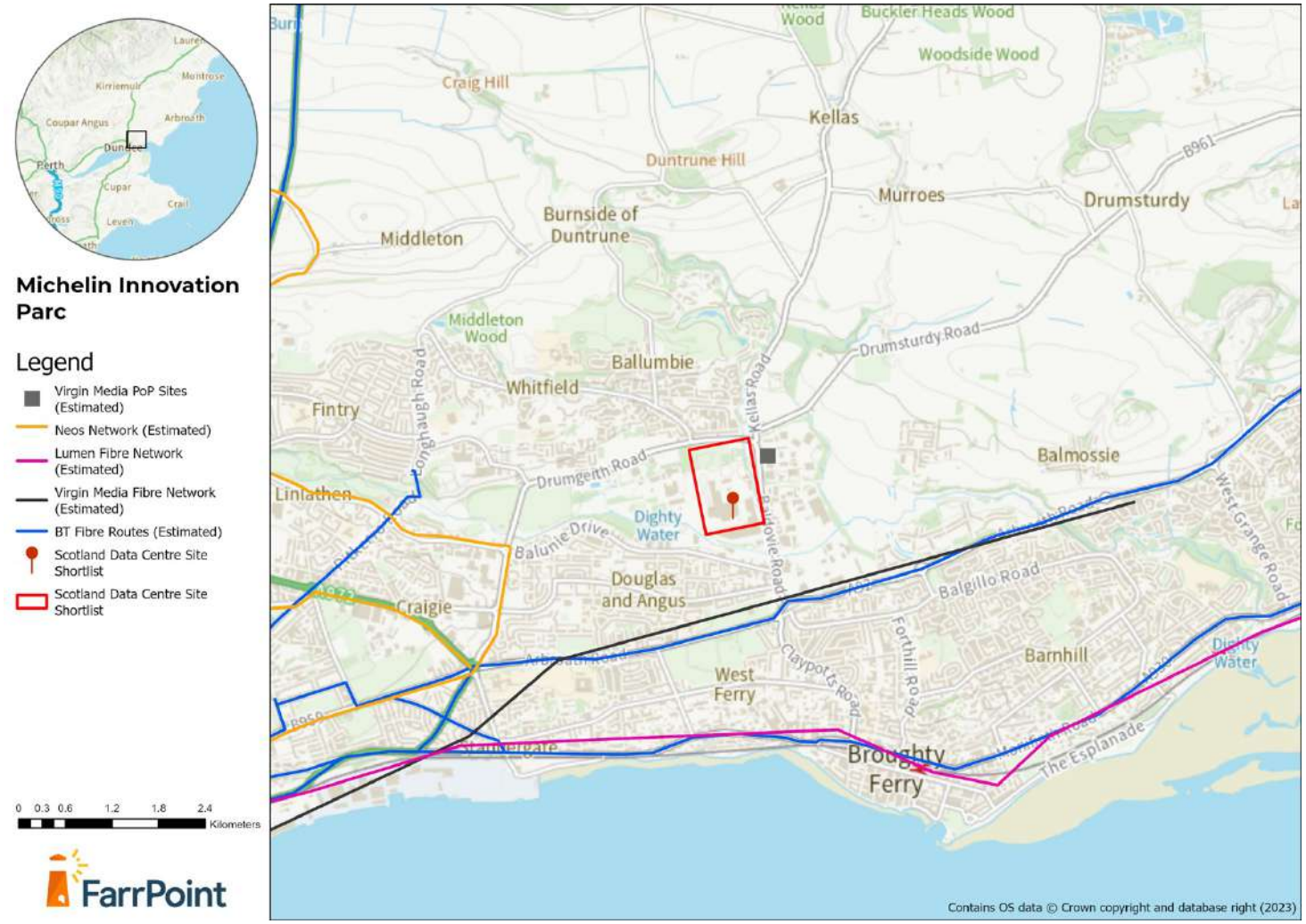
Site Overview	The Michelin Scotland Innovation Parc (MSIP) is an ex-tyre factory focused on sustainable mobility and low-carbon energy. MSIP represents a JV between Scottish Enterprise, Dundee City Council and Michelin. The site has a mixture of large industrial units, neighbouring land and car parking.					
Position: >250,000 population within 40 km	Plot: Approx. 80 acres for all MSIP	Power: up to 15 MW steam supply from EfW plus 4.2MW wind turbines	Ping: Close to Virgin Media & Openreach. Others not far away.	Protection: Some parts of the site subject to flood risk.	Programme: Various business support measures on offer	Proposition: Urban Colocation
TechRE Comments	An excellent data centre site, offering speed to market with high quality industrial units. Low carbon electricity is available from two sources, on-site wind generation through two wind turbines and via a private wire connection with MEB, a neighbouring energy from waste (EfW) plant. The site could easily support data centre requirements for the east coast of Scotland. Dundee has also become a recent gaming / e-sports hub which adds to Dundee's unique story.					

MICHELIN SCOTLAND INNOVATION PARC

IMAGES

MICHELIN SCOTLAND INNOVATION PARC

FIBRE



Notes

- Virgin Media and Openreach fibre routes in the vicinity
- Neos and Lumen also nearby

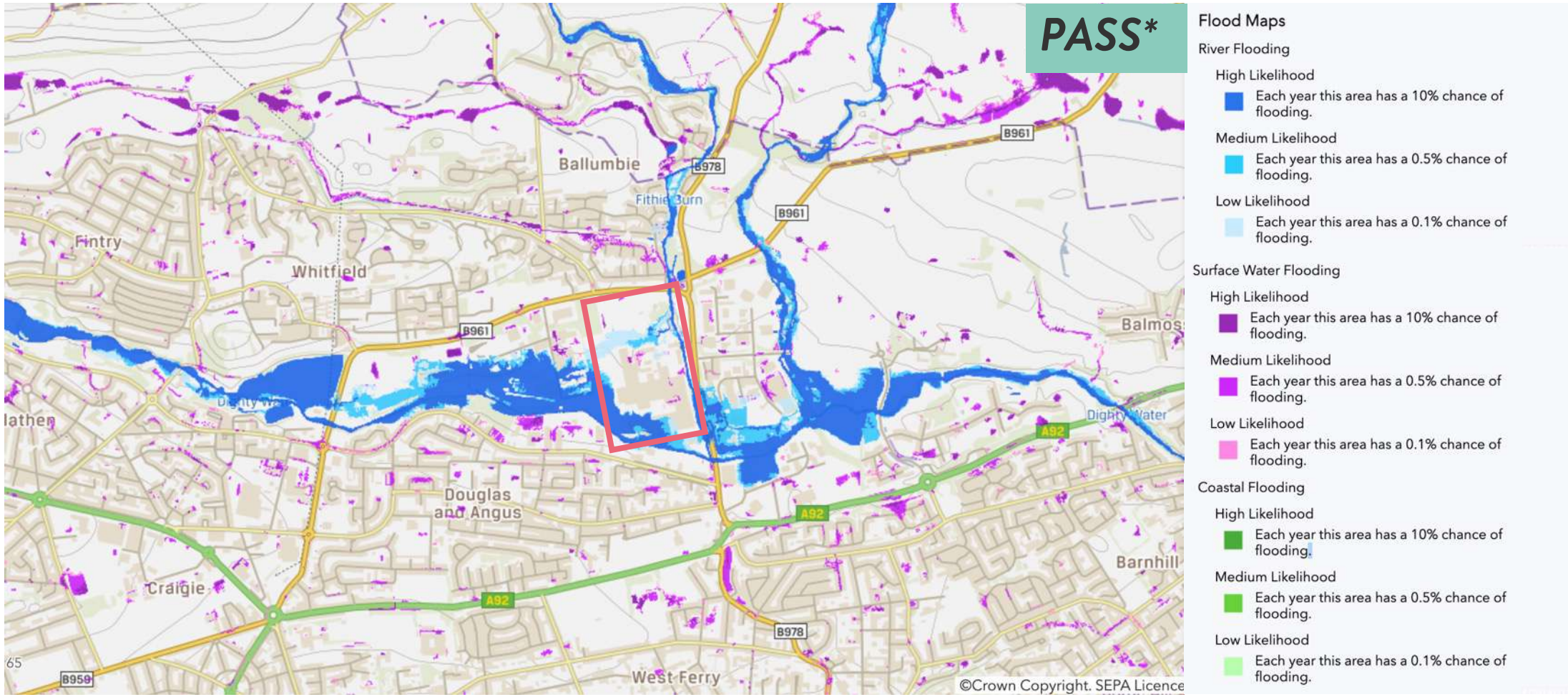
Nearby PoPs:

- Virgin Media
- BT OHP/Ethernet Node in Dundee

Note: Fibre routes are deduced from data available

MICHELIN SCOTLAND INNOVATION PARC

FLOOD RISK ASSESSMENT



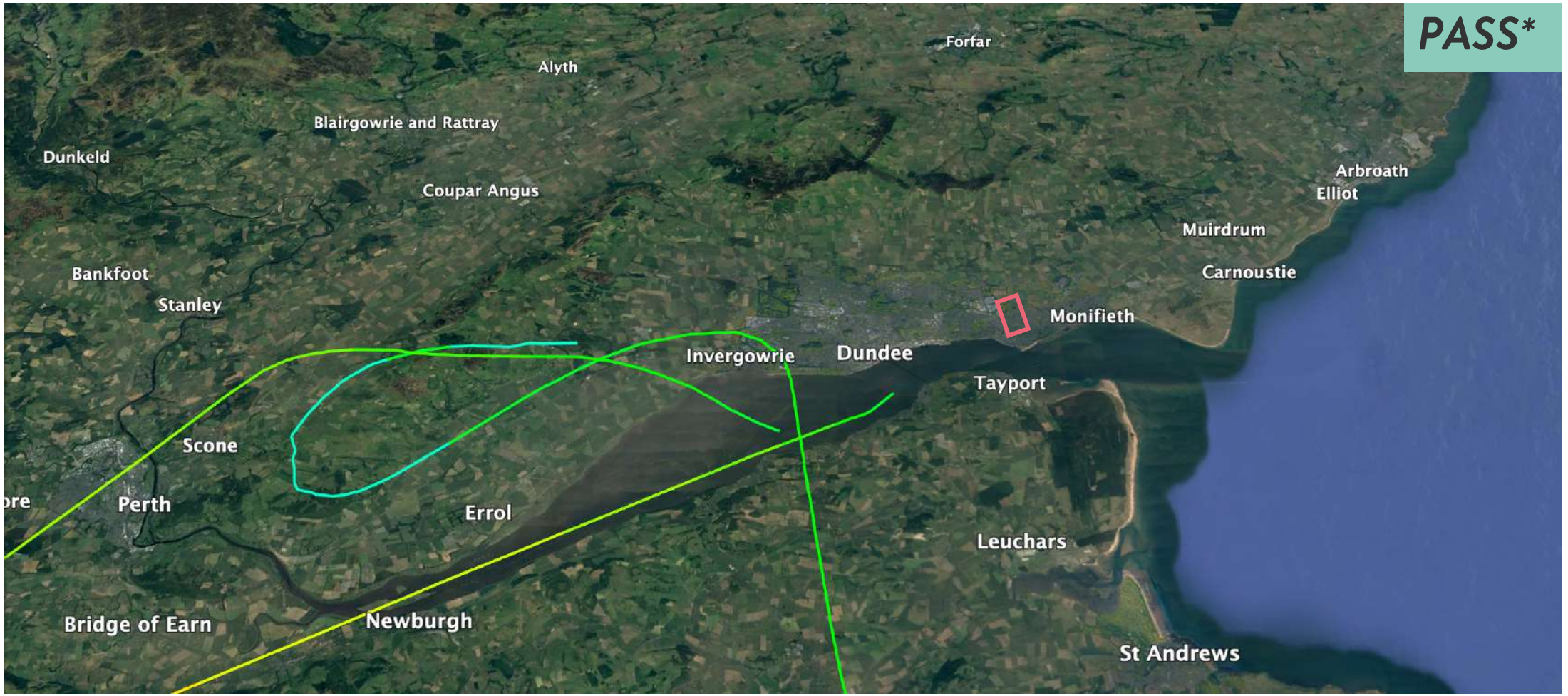
*Note, further due diligence is recommended - TechRE assessment

MICHELIN SCOTLAND INNOVATION PARC

POWER

MICHELIN SCOTLAND INNOVATION PARC

FLIGHT PATH ASSESSMENT



*TechRE assessment

SHORTLIST

MILLERHILL

MIDLOTHIAN

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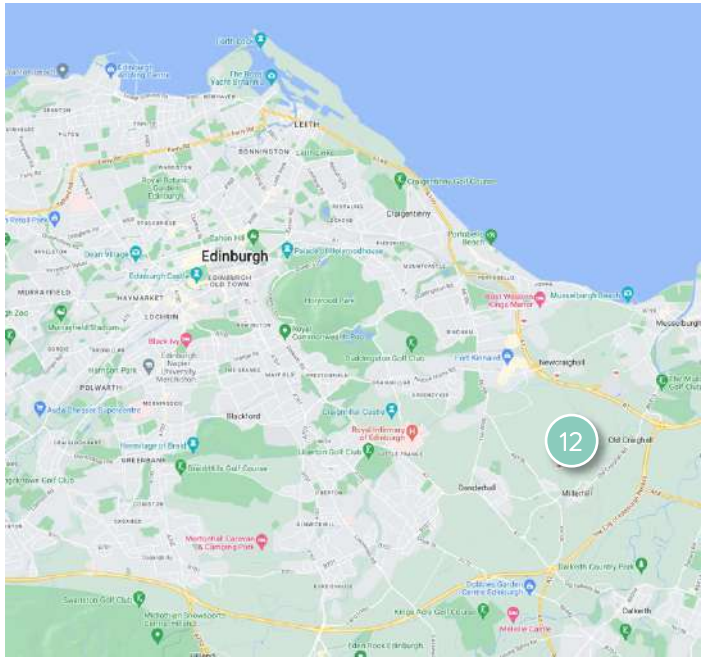
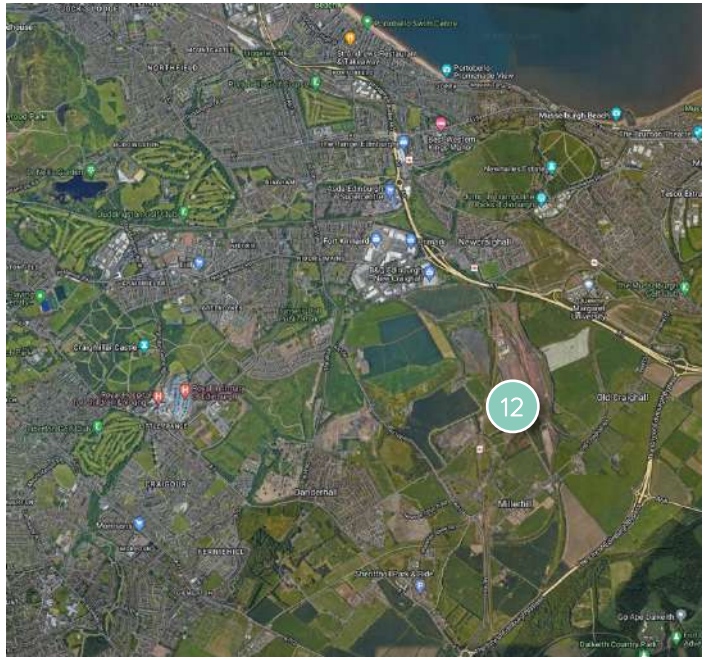
SCOTLAND

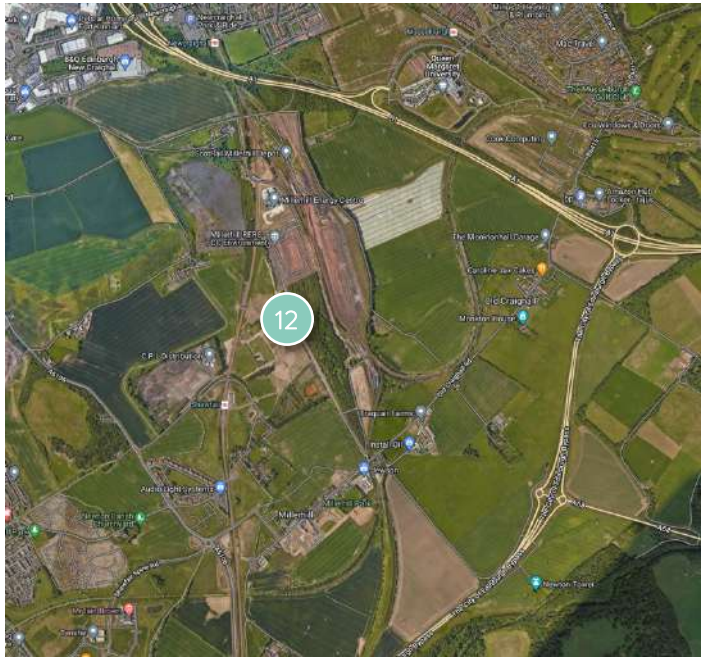
MILLERHILL/OLD CRAIGHALL, MIDLOTHIAN

OVERVIEW

Site Overview	This site was part of the former Monkontonhall mine and is jointly owned by Midlothian and the City of Edinburgh Council. It is located on the SW edge of Edinburgh close to the A1 and Queen Margaret University in an area earmarked for development and undergoing significant infrastructure improvements.					
Position: Close proximity to Edinburgh & A1	Plot: 28 acres of greenfield and forested land	Power: 20MW of heat from EfW plant with private wire opportunity	Ping: Multiple carriers and opportunity for direct Zayo connection	Protection: Potential land contamination issues need assessment	Programme: Some land preparation works required.	Proposition: Urban colocation use
TechRE Comments	Excellent location close to Edinburgh, the University and a new junction onto the A1. The owners of the new EfW plant believe there is capacity for a 9MW private wire arrangement to a potential data centre facility. Good fibre connectivity to a Tier one carrier. Land under private ownership nearby is also available.					







MILLERHILL/OLD CRAIGHALL, MIDLOTHIAN

IMAGES

MILLERHILL/OLD CRAIGHALL, MIDLOTHIAN

FIBRE

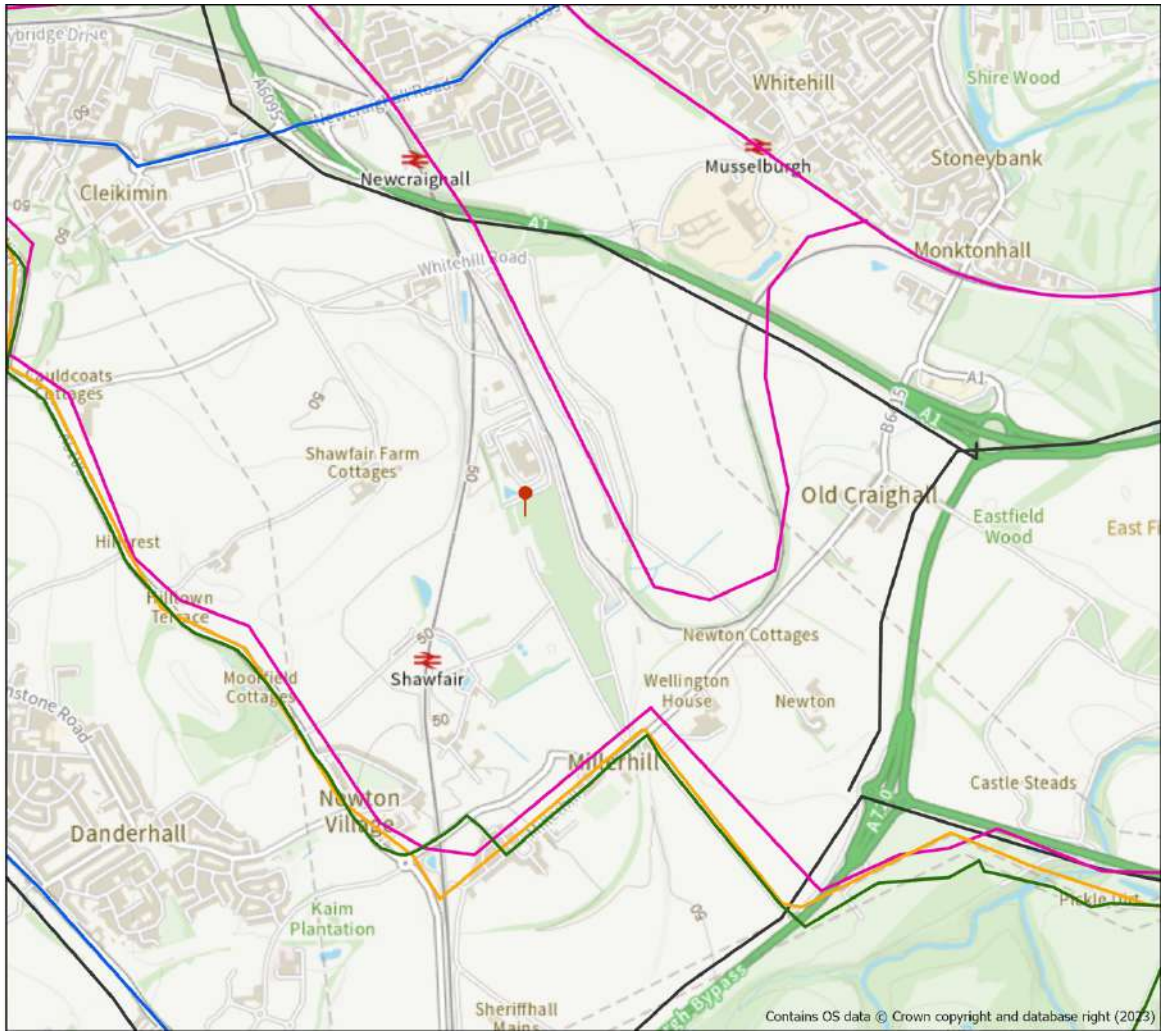
Millerhill, Midlothian

Legend

- Zayo Core Network (Estimated)
- Neos Network (Estimated)
- Lumen Fibre Network (Estimated)
- Virgin Media Fibre Network (Estimated)
- BT Fibre Routes (Estimated)
- Scotland Data Centre Site Shortlist

0 0.15 0.3 0.6 0.9 1.2 Kilometers

FarrPoint



Notes

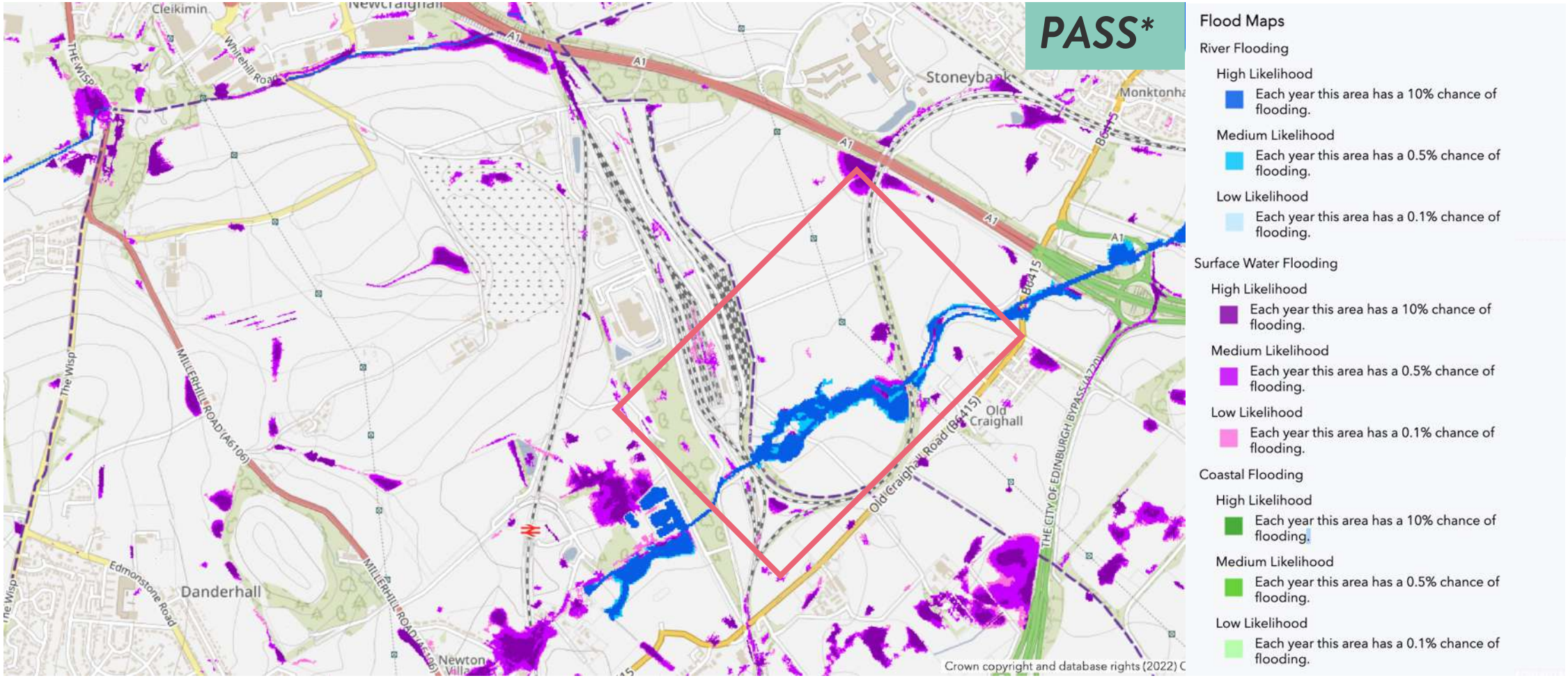
Multiple operators in the vicinity including:

- Openreach
- Lumen
- Neos
- Zayo
- Virgin Media

Note: Fibre routes are deduced from data available in the public domain.

MILLERHILL/OLD CRAIGHALL, MIDLOTHIAN

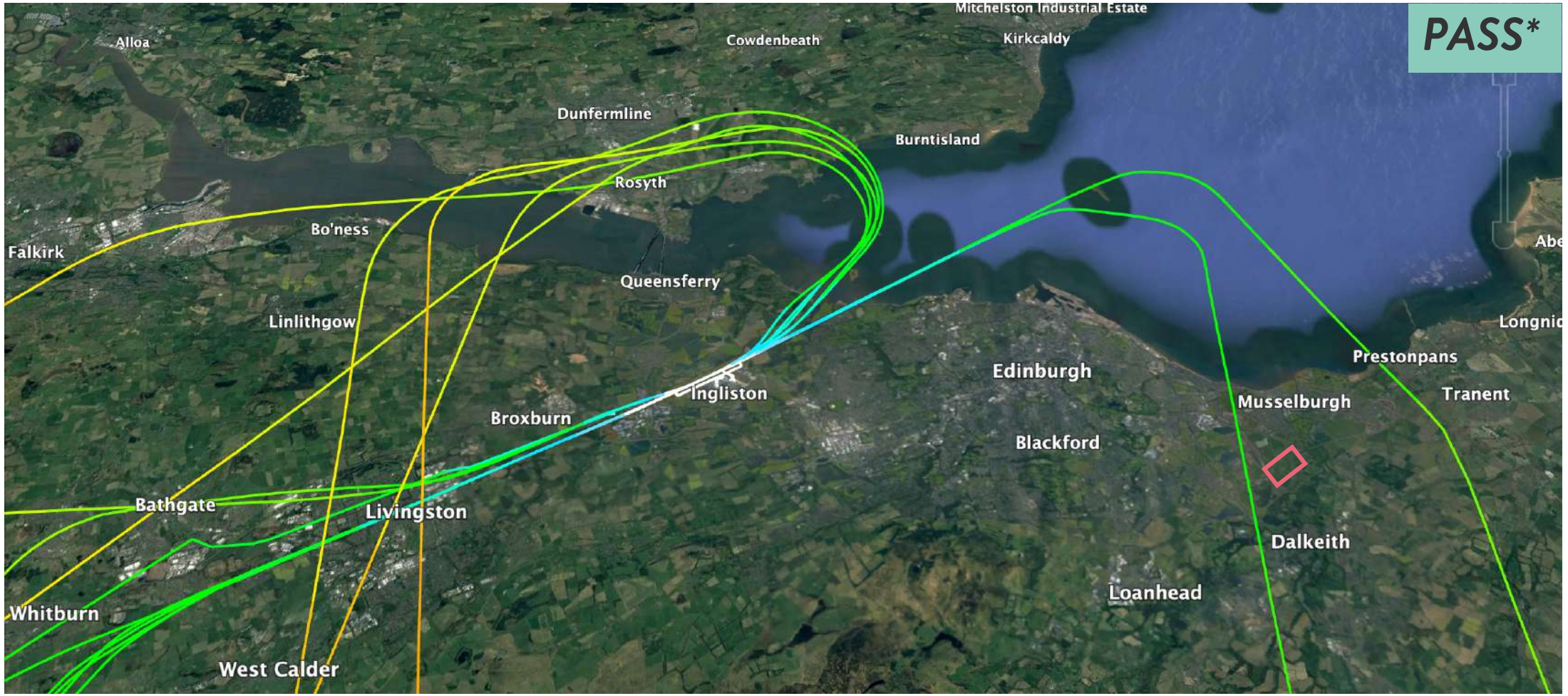
FLOOD RISK ASSESSMENT



* Note, a stream crosses the area but the Cairney Burn flood relief works for Shawfair town are due to start in May 2023 which will largely mitigate any flooding risk in the area – TechRE assessment

MILLERHILL/OLD CRAIGHALL, MIDLOTHIAN

FLIGHT PATH ASSESSMENT



*Note, some flights observed nearby but >5,000 ft and not on the main path -TechRE assessment

SHORTLIST

PEEL PORTS HUNTERSTON

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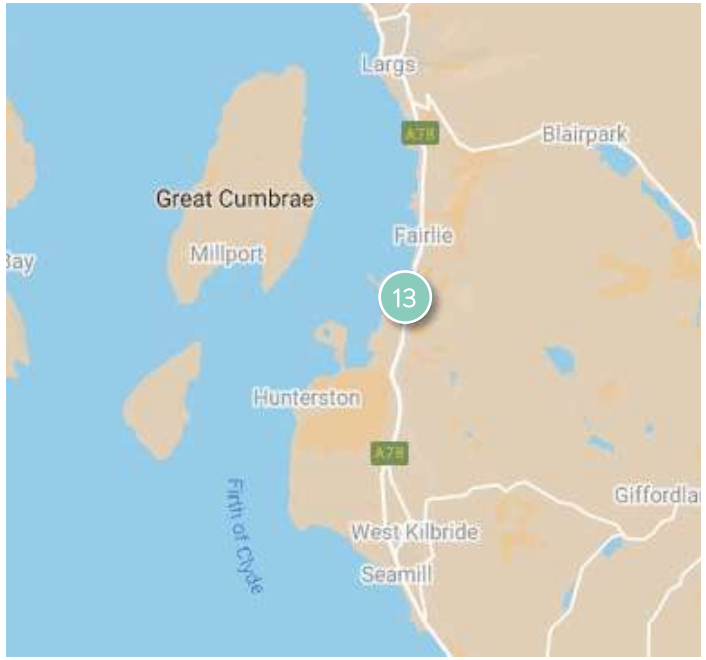
PEEL PORTS HUNTERSTON

OVERVIEW

Site Overview	A deep water port previously used for transport and set down of coal which was delivered to the nearby coal-fired power station now being transformed into a blue-green economy campus. A large scale site with an approved development framework in place plus identification as a Strategic Asset in the National Planning Framework 4.					
Position: SW of Glasgow > 250,000 pop. within 40km	Plot: ~320 acres for development	Power: Future cable landing point for offshore wind providing up to 2GW.	Ping: Limited to Openreach	Protection: Some parts of the site subject to flood risk but flood data sets available	Programme: Dev. of the site has govt support & enabling work in progress	Proposition: Hyperscale
TechRE Comments	An opportunity on the west coast where an operator could look to support nearby Glasgow or create a hyperscale renewables campus. There is 6-7MVA power already servicing the site with the potential for another 10MVA from a solar array and up to 2GW power from offshore wind farms via a future cable landing point on the site.					

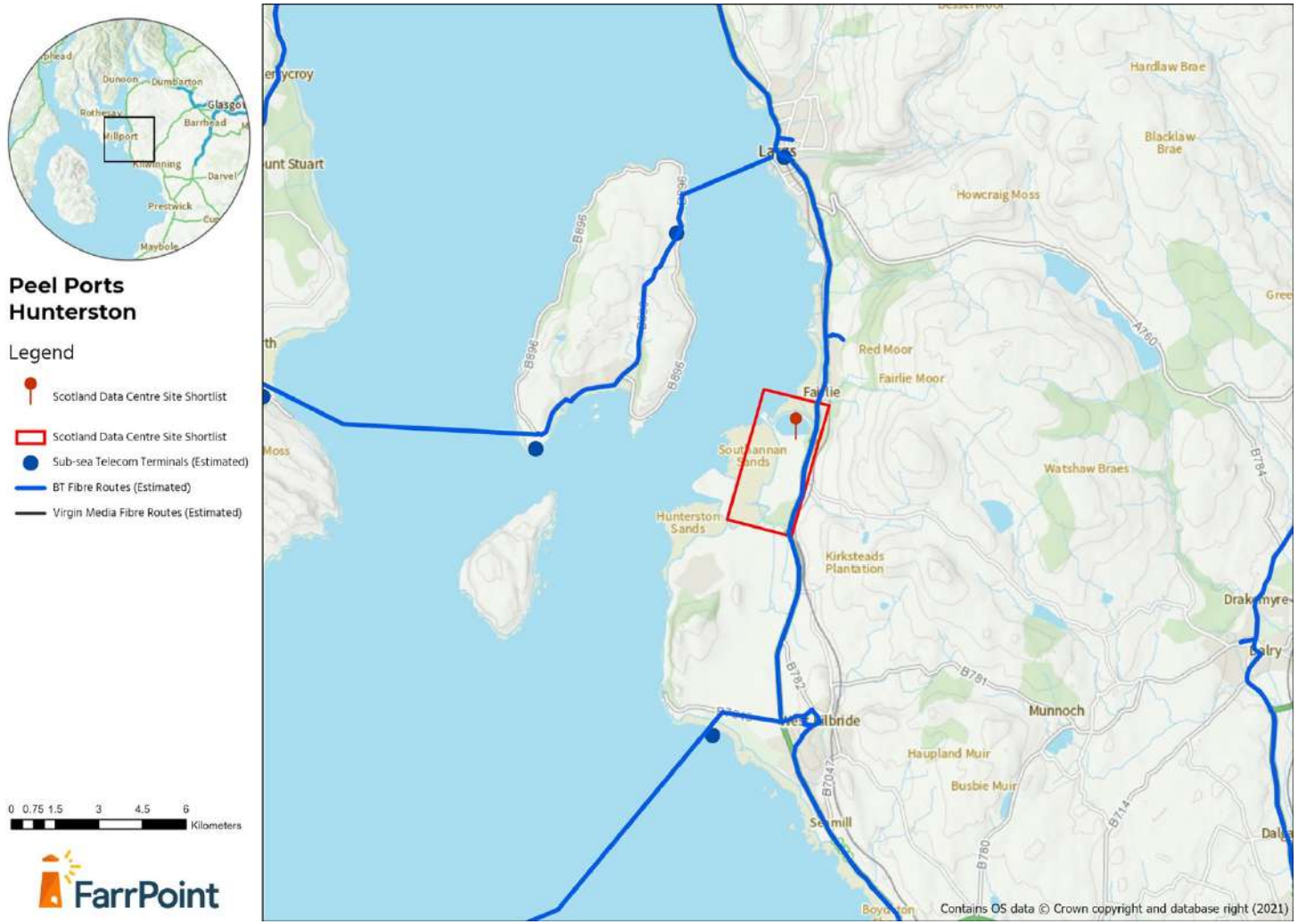


PEEL PORTS HUNTERSTON

IMAGES

PEEL PORTS HUNTERSTON

FIBRE



Notes

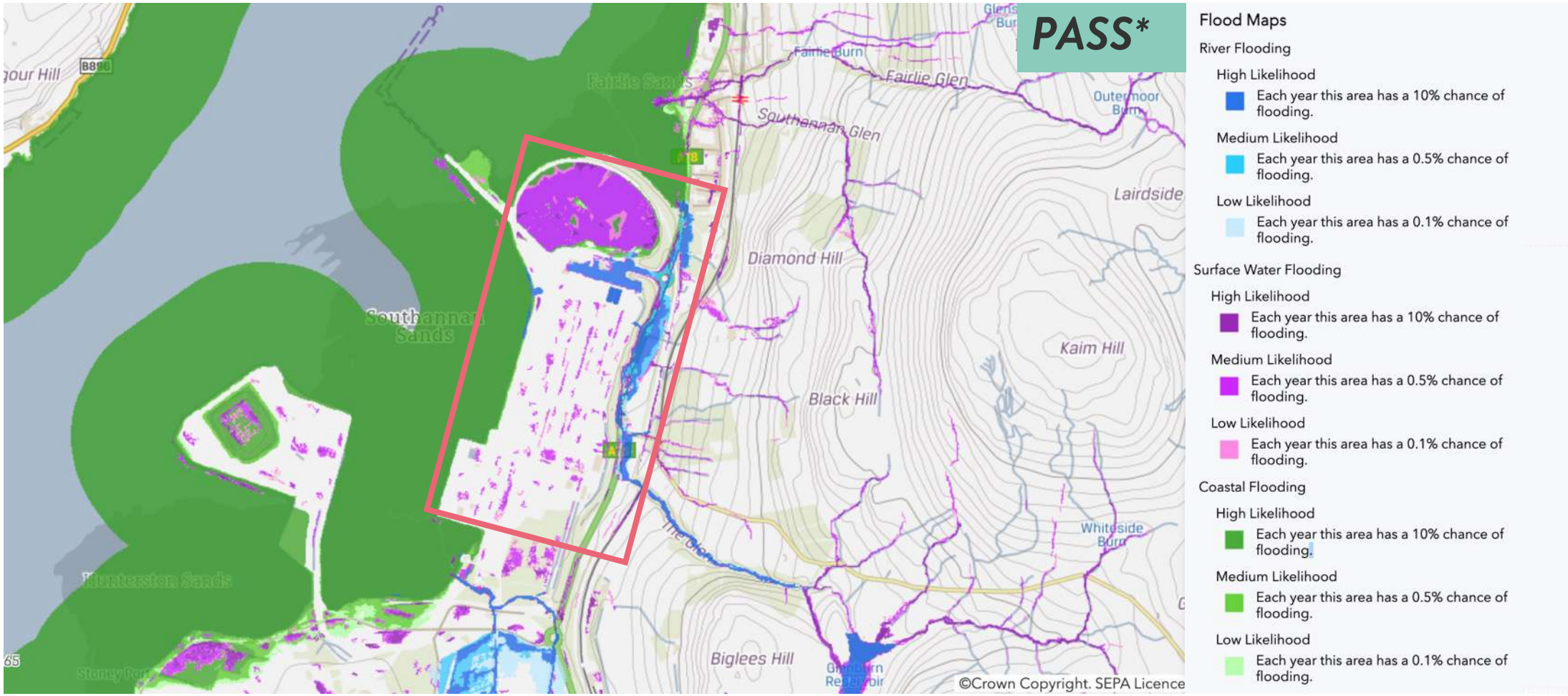
- Openreach fibre in the vicinity and proposed Openreach subsea fibre route.

Nearby PoPs:

- BT OHP/Ethernet Nodes to the south in Ardrossan / Irvine

Note: Fibre routes are deduced from data available in the public domain.

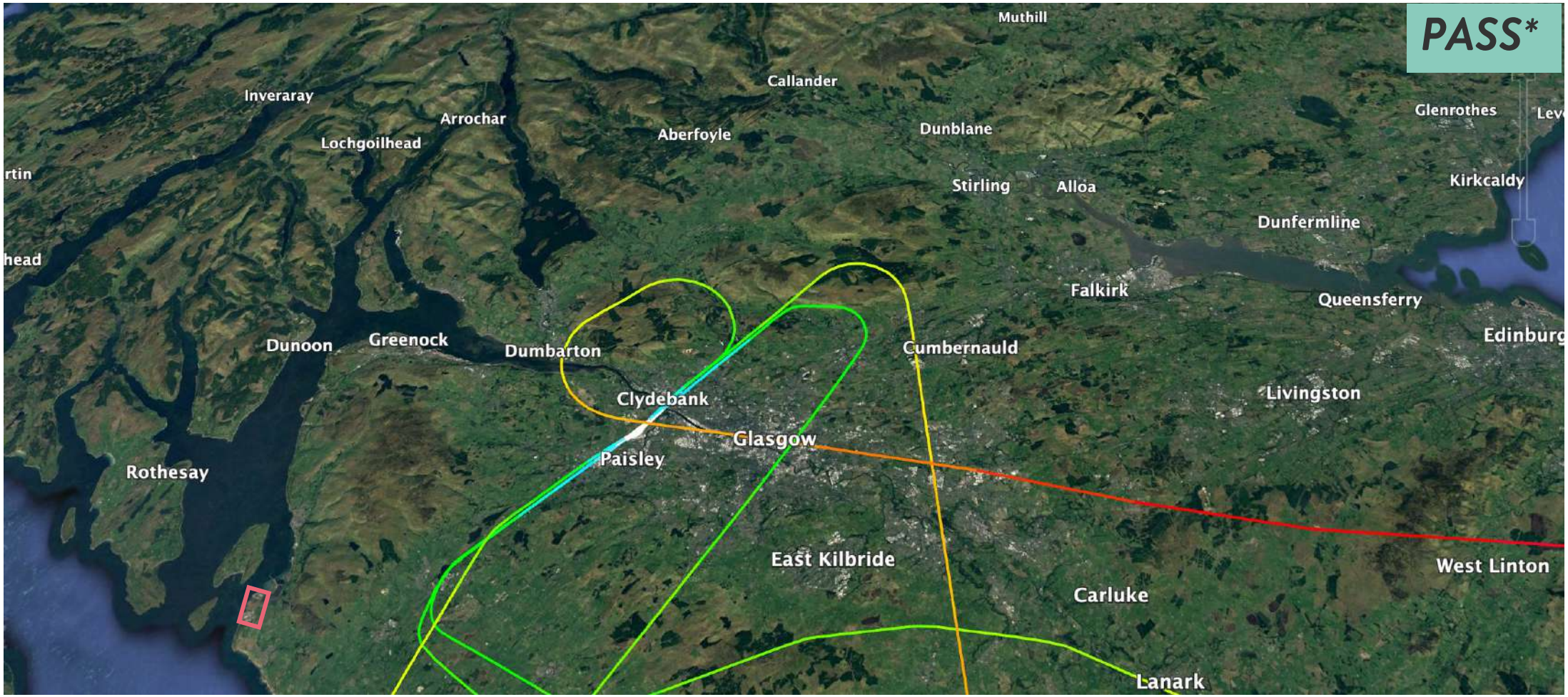
PEEL PORTS HUNTERSTON
FLOOD RISK ASSESSMENT



*Note further due diligence is recommended. Comprehensive flood data sets are available for this site - TechRE assessment

PEEL PORTS HUNTERSTON

FLIGHT PATH ASSESSMENT



*TechRE assessment

SHORTLIST

PYRAMIDS

BATHGATE, WEST LOTHIAN

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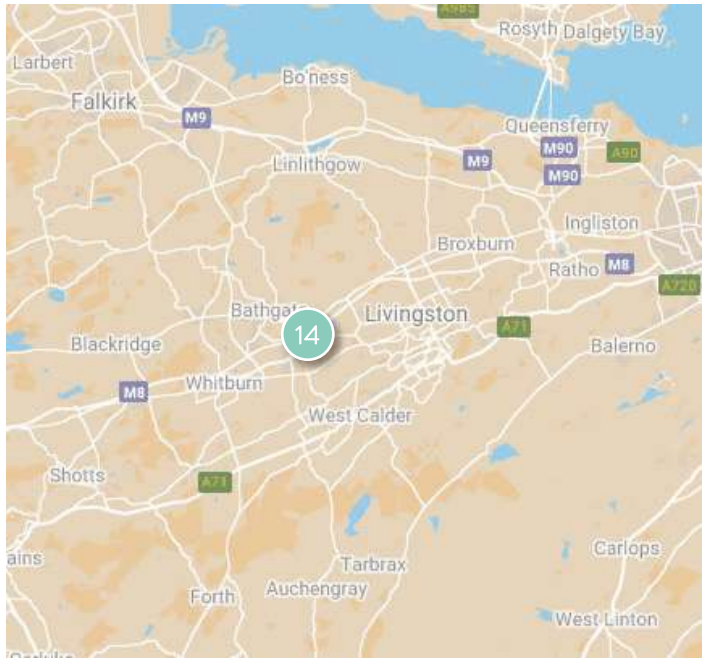
SCOTLAND

PYRAMIDS
OVERVIEW

Site Overview	A former semi-conductor plant with large halls, office space and additional development potential on the land around the site. The site was recently purchased by London & Regional (L&R) and earmarked for redevelopment as a site for film & television production. L&R will also consider other uses for new build development.					
Position: Strategically located between Glasgow & Edinburgh	Plot: Approx. 100 Acres	Power: 100 MW	Ping: Multiple carriers incl Zayo in the vicinity	Protection: No hazards observed	Programme: Now likely to be part of a partial / fulll site redevelopment	Proposition: Hyperscale or urban colocation
TechRE Comments	Pyramids occupies an excellent location between the two major conurbations. The site could access renewable power from nearby windfarms south of the M8 as well as Tier One fibre connectivity. Whilst the existing building offers an opportunity to be fitted out as a data centre, there is also potential for a new facility as part of partial/ full redevelopment of the site in the extensive landscaped areas of the Business Park.					



PYRAMIDS
IMAGES

*Note these images are shown to highlight connections to base infrastructure that are present in the vicinity

PYRAMIDS
FIBRE

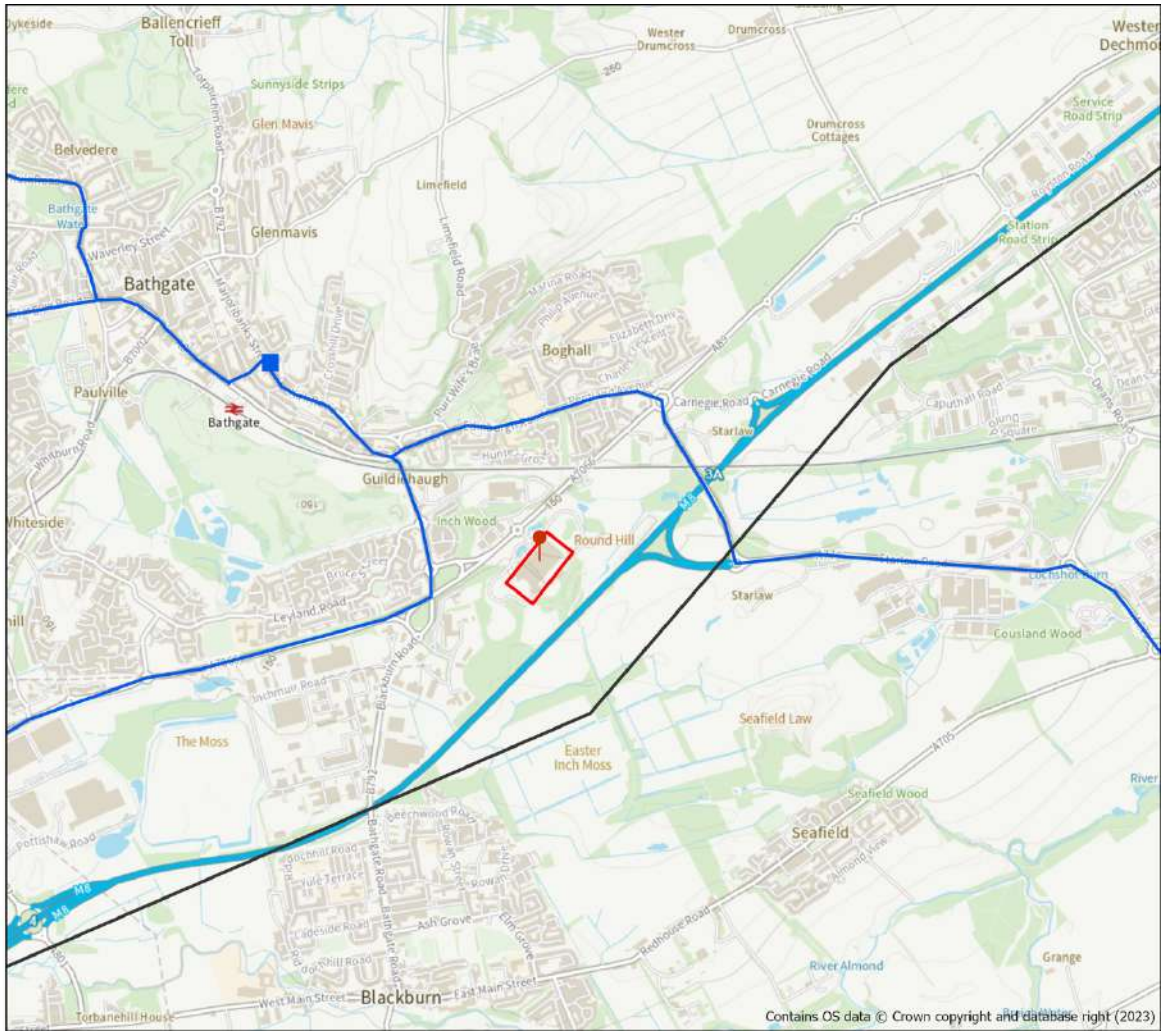
Pyramids Data Centre

Legend

- Virgin Media Fibre Network (Estimated)
- BT Ethernet Nodes (Estimated)
- BT Fibre Routes (Estimated)
- Scotland Data Centre Site Shortlist
- Scotland Data Centre Site Shortlist

0 0.23 0.45 0.9 1.35 1.8 Kilometers

FarrPoint



Notes

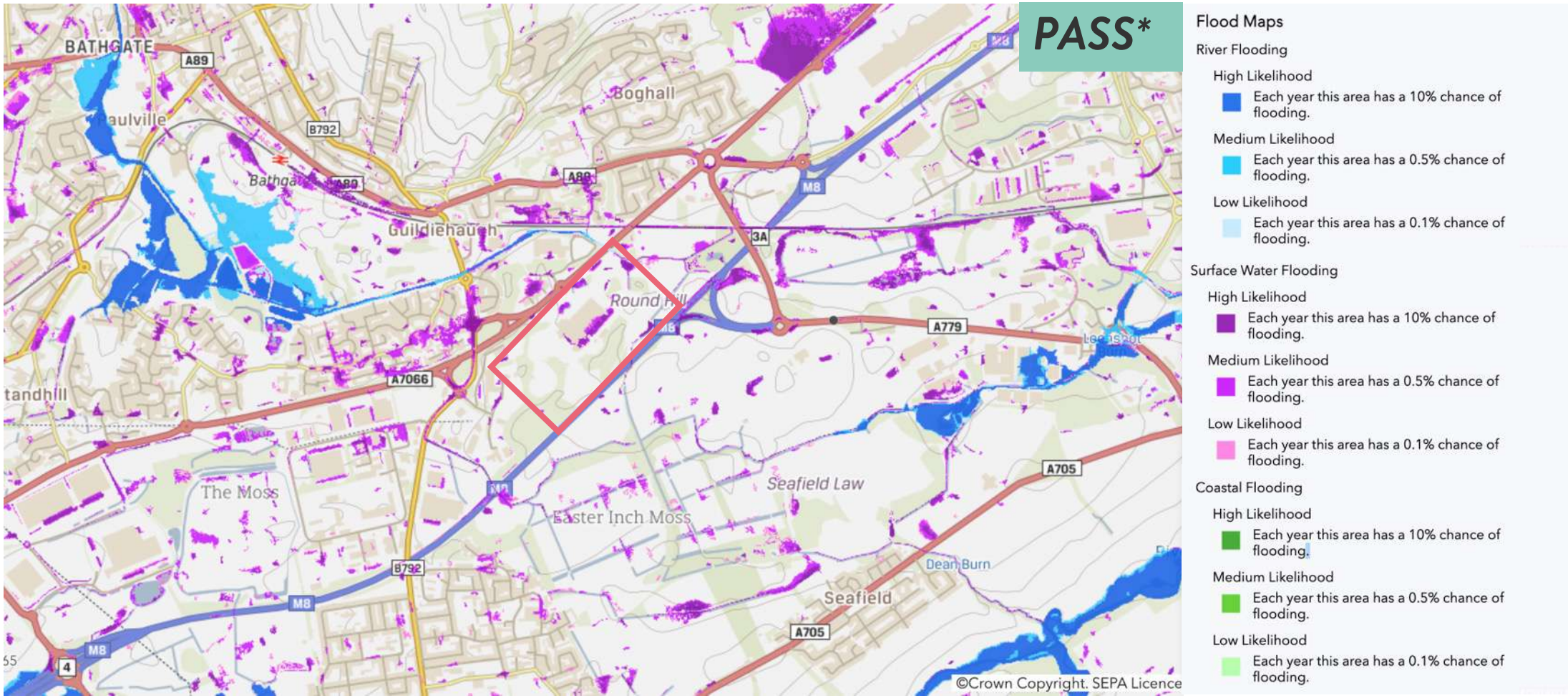
- Virgin Media in the vicinity
- BT/Openreach in the vicinity
- Zayo runs in East – West direction <4km to the north

Nearby PoPs:

- BT OHP/Ethernet Node in Bathgate

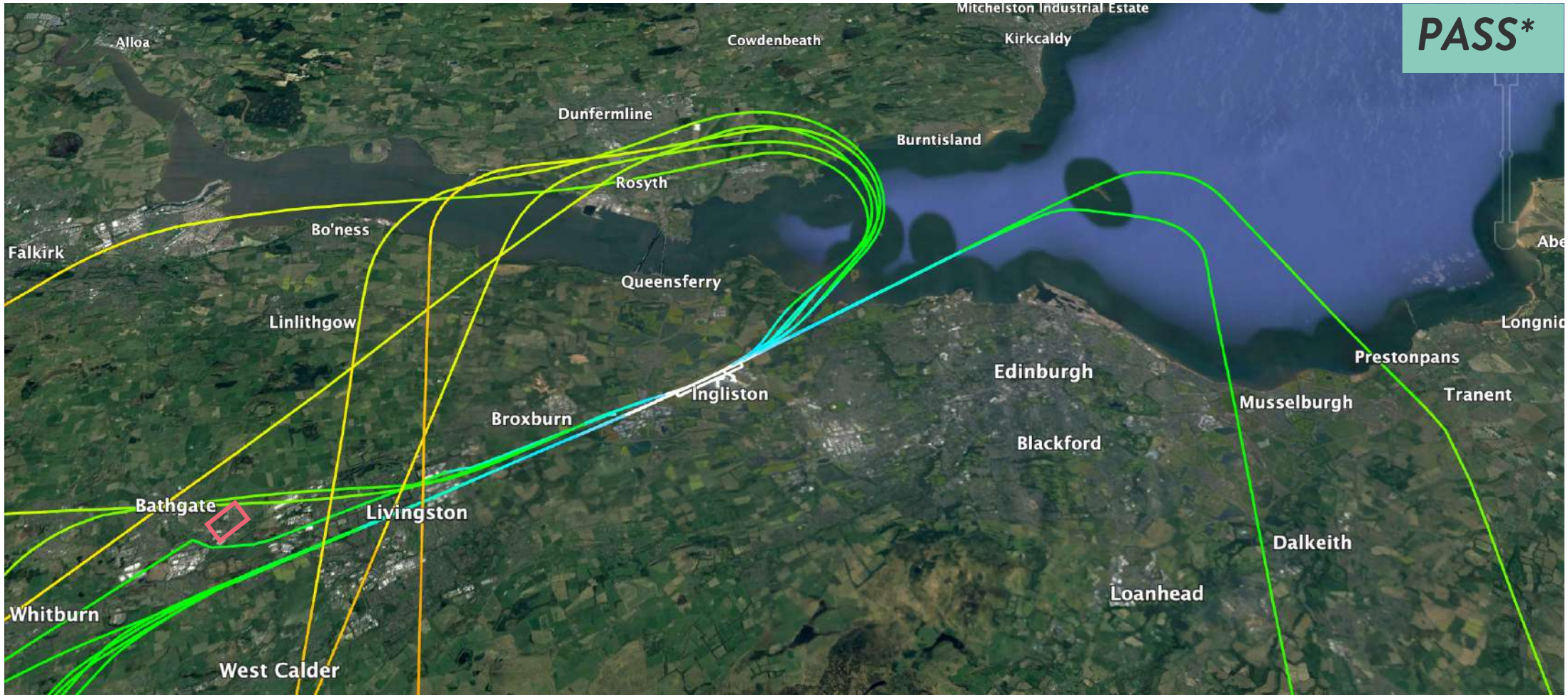
Note: Fibre routes are deduced from data available in the public domain.

PYRAMIDS
FLOOD RISK ASSESSMENT



*TechRE assessment

PYRAMIDS
FLIGHT PATH ASSESSMENT



*Note, some flights observed nearby but >5,000 ft and away from the main path -TechRE assessment

SHORTLIST

QUEENSFERRY ONE

ROSYTH, FIFE

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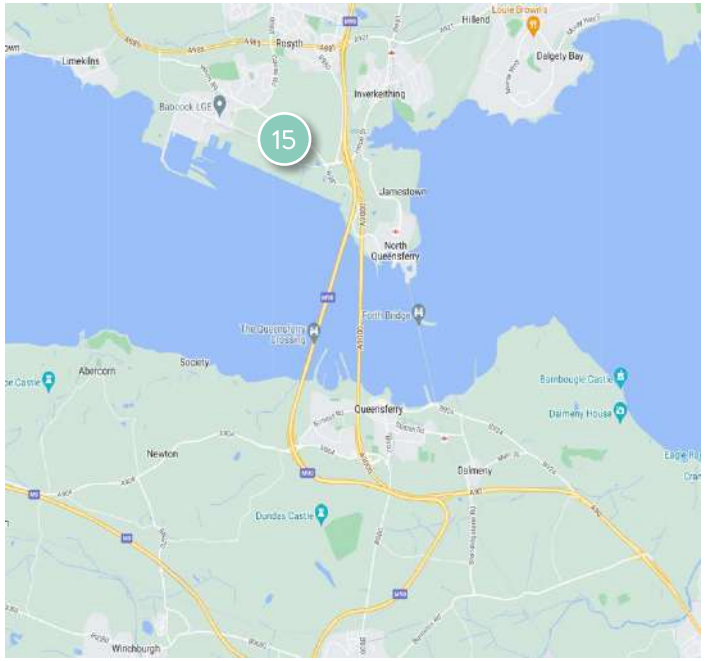
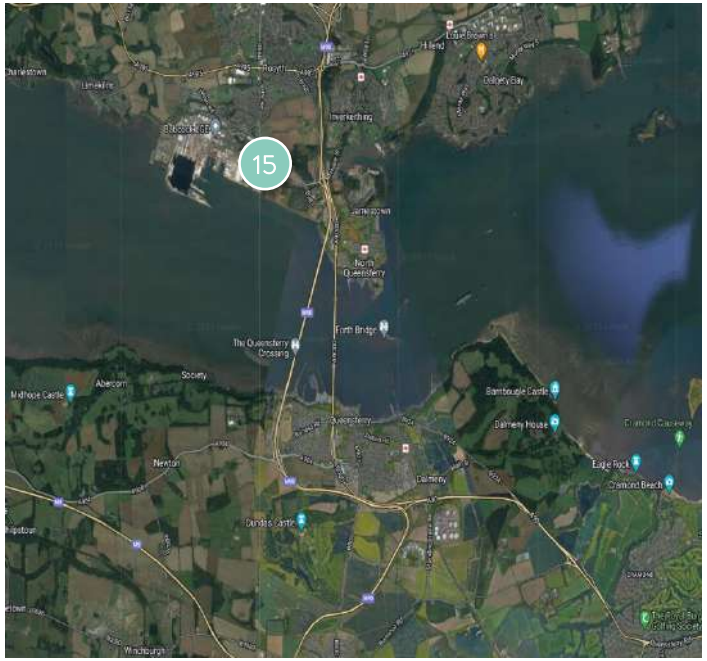
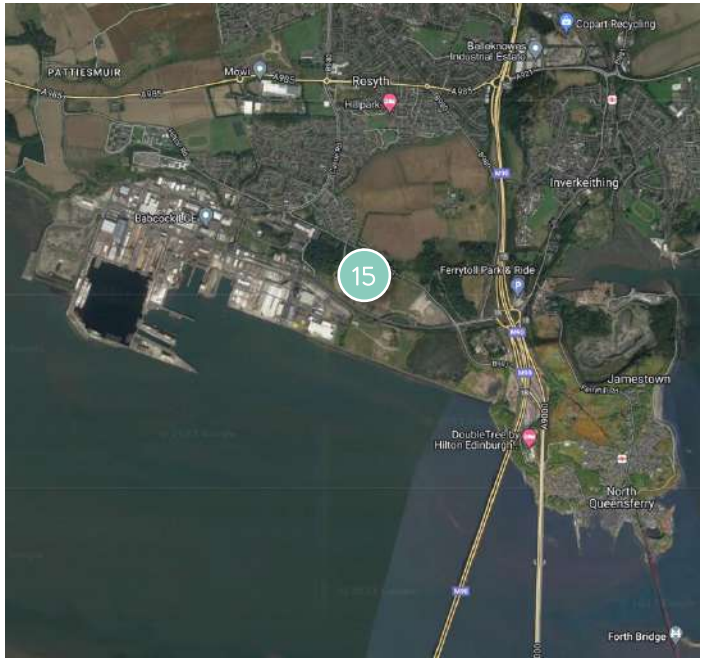
QUEENSFERRY ONE, ROSYTH
OVERVIEW

Site Overview	Situated in the newly established Forth Green Freeport, Queensferry One is being planned as an industrial and logistics hub with various development options available.					
Position: Close proximity to Edinburgh	Plot: 120 acres with individual unit sizes up to 500,000 sf	Power: New primary substation under consideration up to 30MW	Ping: multiple carriers closeby	Protection: In a coastal flood risk zone but mitigation works in place	Programme: Serviced plots available now.	Proposition: Urban colocation use
TechRE Comments	A very accessible site just north of Edinburgh with Green Freeport tax incentives available. The land has been raised by 0.5m to ensure it is outwith the 1 in 200 year flood risk. Green Freeport status will help attract new green technologies, alternative fuels and renewable energy manufacturing in the area.					







QUEENSFERRY ONE, ROSYTH

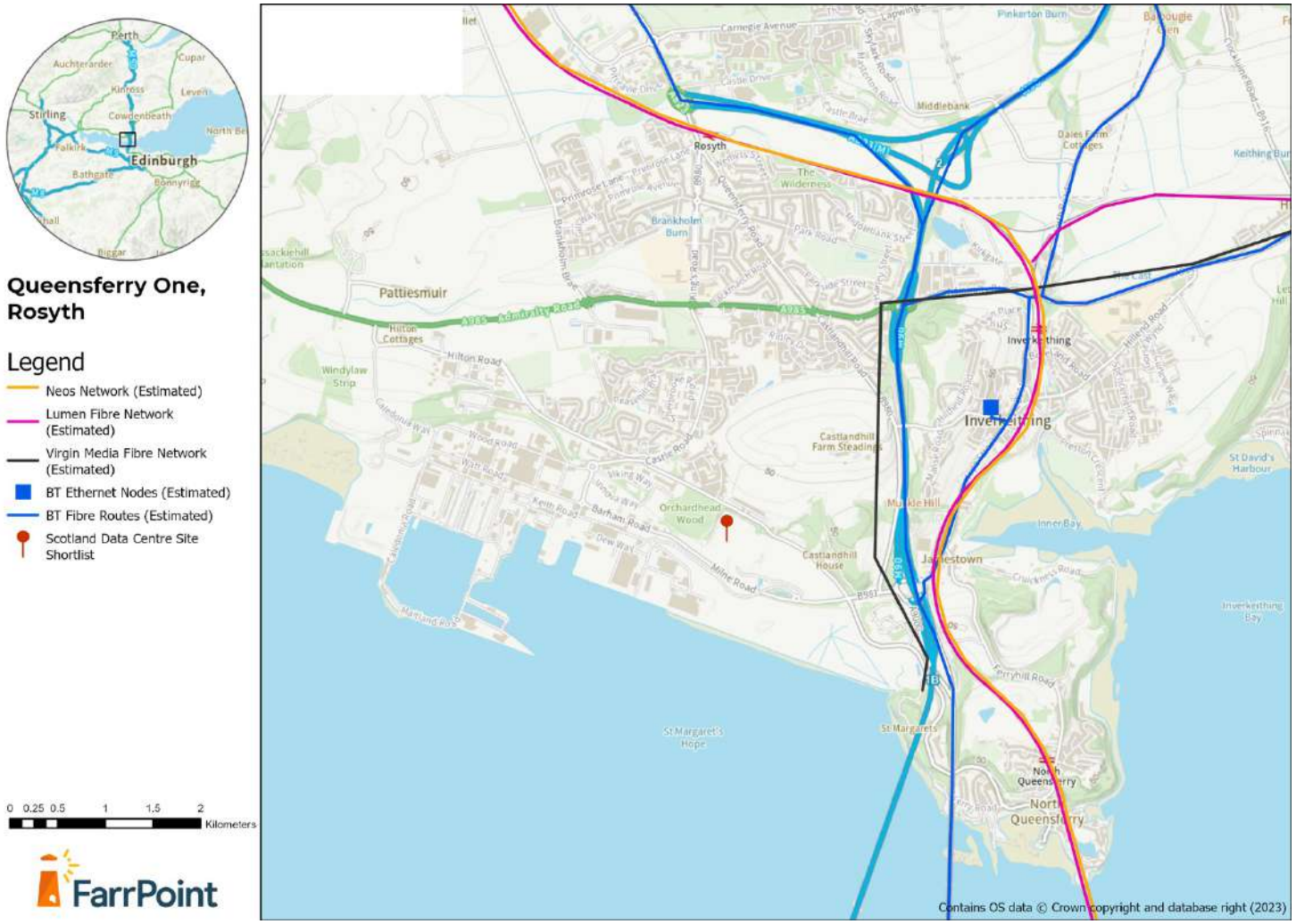
IMAGES

QUEENSFERRY ONE, ROSYTH

IMAGES

QUEENSFERRY ONE, ROSYTH

FIBRE



Notes

Mutiple operators in the vicinity including:

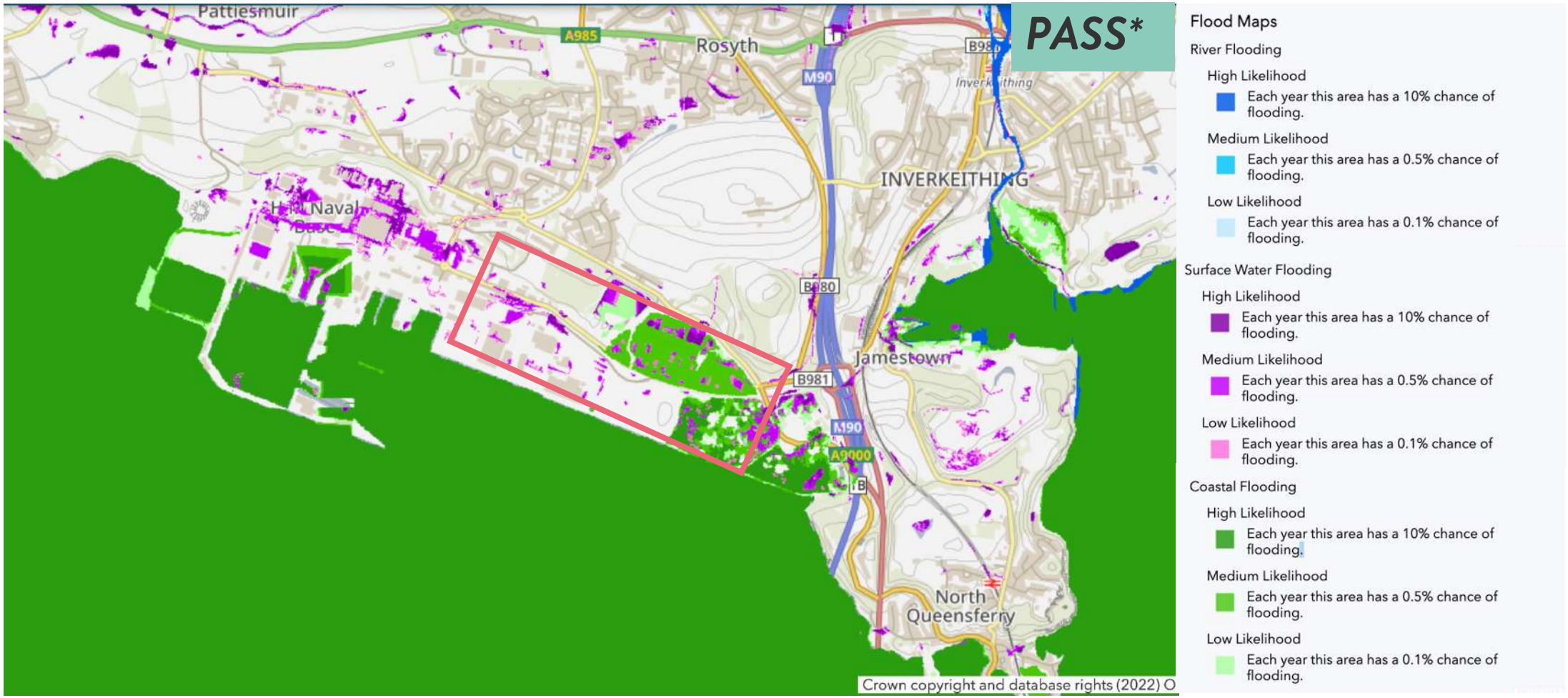
- Openreach
- Virgin Media
- Neos
- Lumen

Nearby PoPs:

- BT OHP/Ethernet Node in Inverkeithing

Note: Fibre routes are deduced from data available in the public domain.

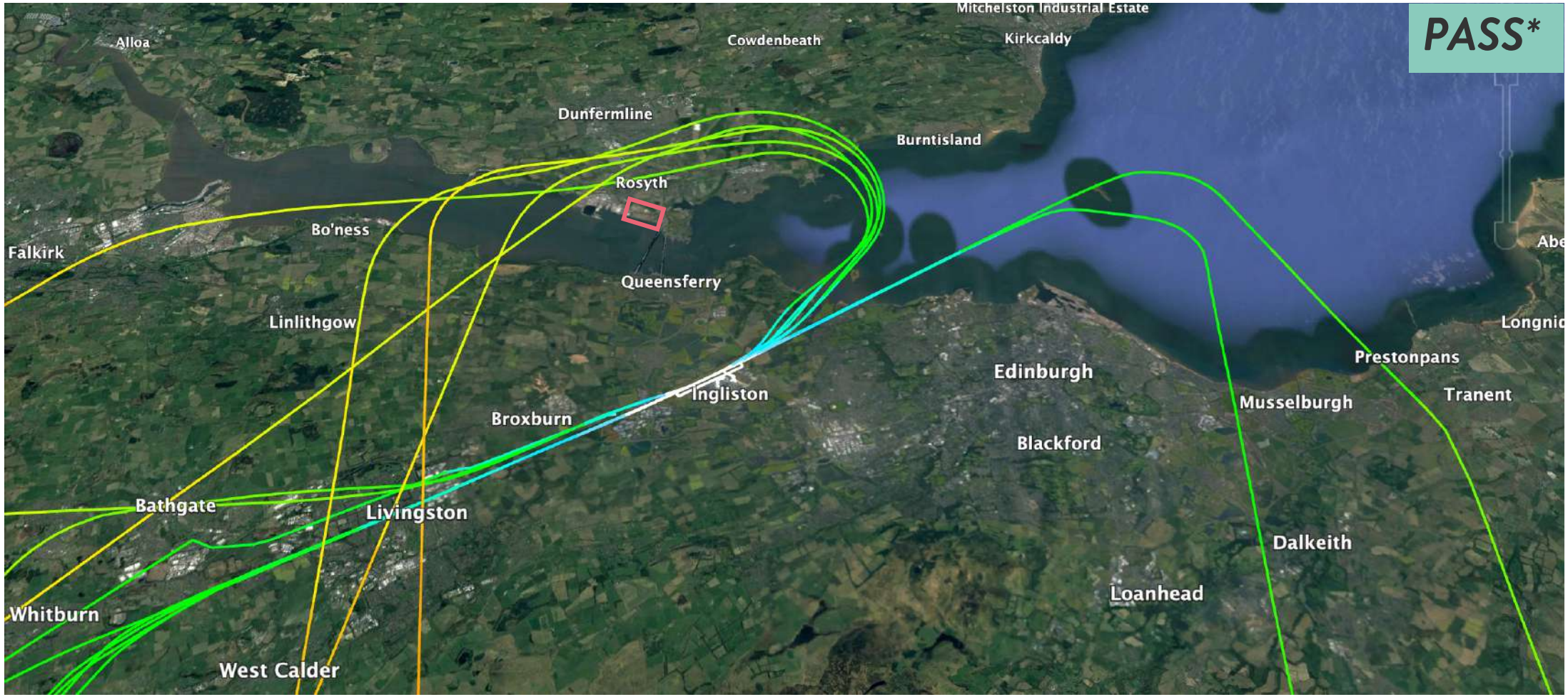
QUEENSFERRY ONE, ROSYTH
FLOOD RISK ASSESSMENT



* Note, land has been raised 0.5 m above the flood risk area to ensure development plots are outside the 0.5% chance of flooding – TechRE assessment

QUEENSFERRY ONE, ROSYTH

FLIGHT PATH ASSESSMENT



*TechRE assessment

SHORTLIST

QUEENSWAY PARK

DATA CENTRES, GLENROTHES

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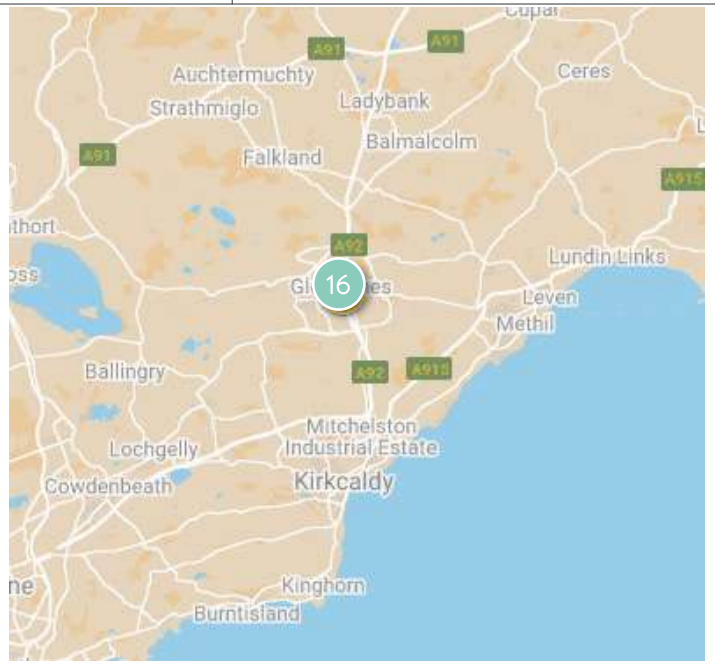
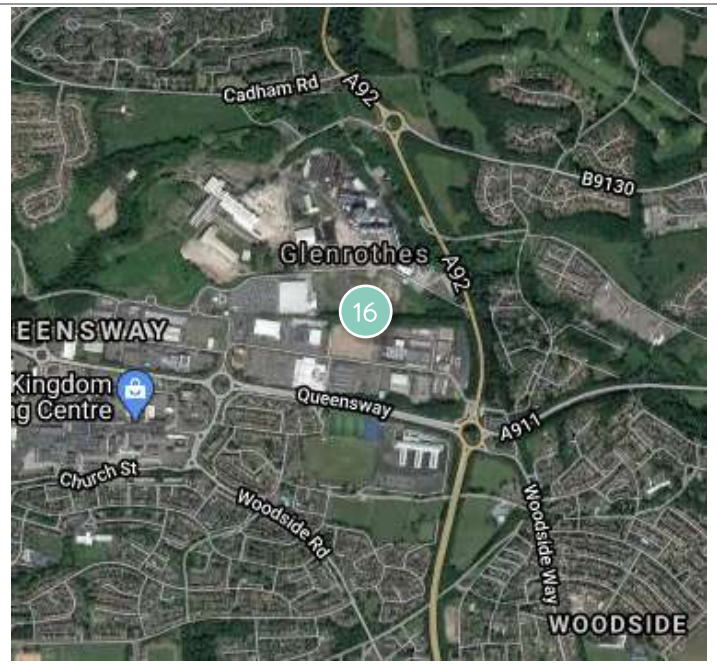
QUEENSWAY PARK DATA CENTRES, GLENROTHES

OVERVIEW

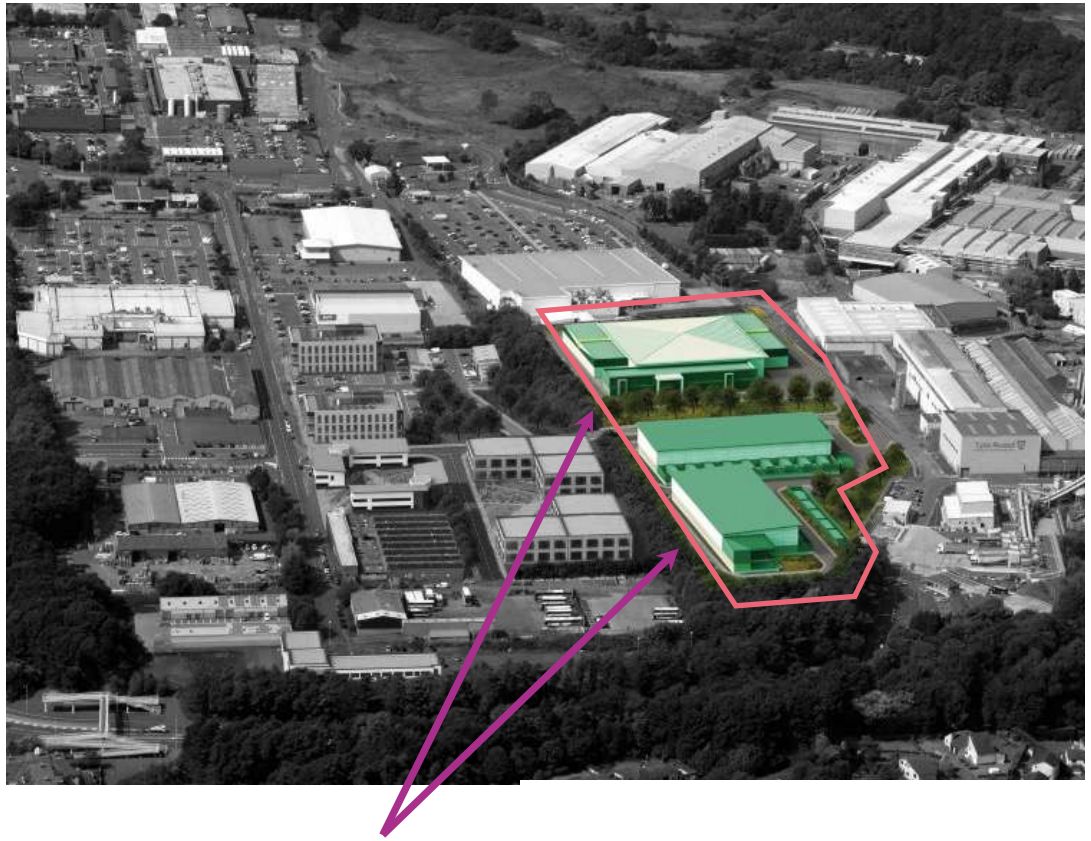
Site Overview	A renewables powered data centre campus within 30 minutes drive of Edinburgh Airport. The campus is designed and tailored for modern data centre use with full consent in place. The total built environment is approx. 250,000 sq. ft.					
Position: >250,000 pop. within 40 km	Plot: 12 acres for the whole campus (3 buildings)	Power: 40MVA (from 100% renewable energy) with further potential	Ping: Openreach and Virgin Media in place plus other networks	Protection: No hazards observed	Programme: Ground preparation works in progress	Proposition: Urban colocation / edge / small hyperscale use
TechRE Comments	With an adjacent RWE renewable energy plant delivering large scale power, good connectivity and a good location north of Edinburgh, Queensway Park Data Centres is strong data centre scheme. Connectivity has been enhanced through agreement with Stellium data centre to connect with their new exchange in North Shields giving access to a new subsea cable connecting the NE to Ireland & Mainland Europe.					





QUEENSWAY PARK DATA CENTRES, GLENROTHES

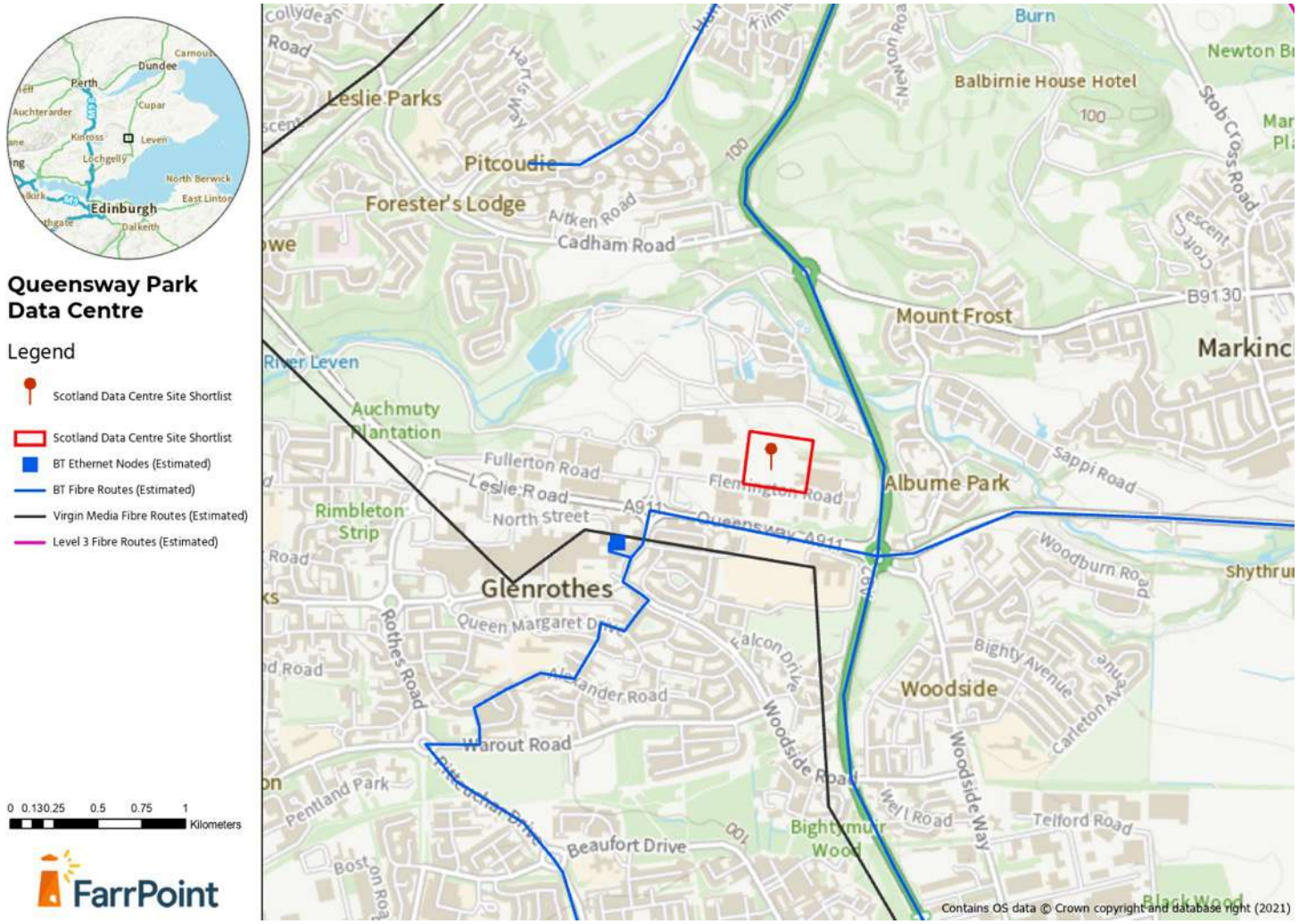
IMAGES



The proposed purpose built buildings.

QUEENSWAY PARK DATA CENTRES, GLENROTHES

FIBRE



Notes

- Openreach fibre and Virgin Media fibre expected in the vicinity

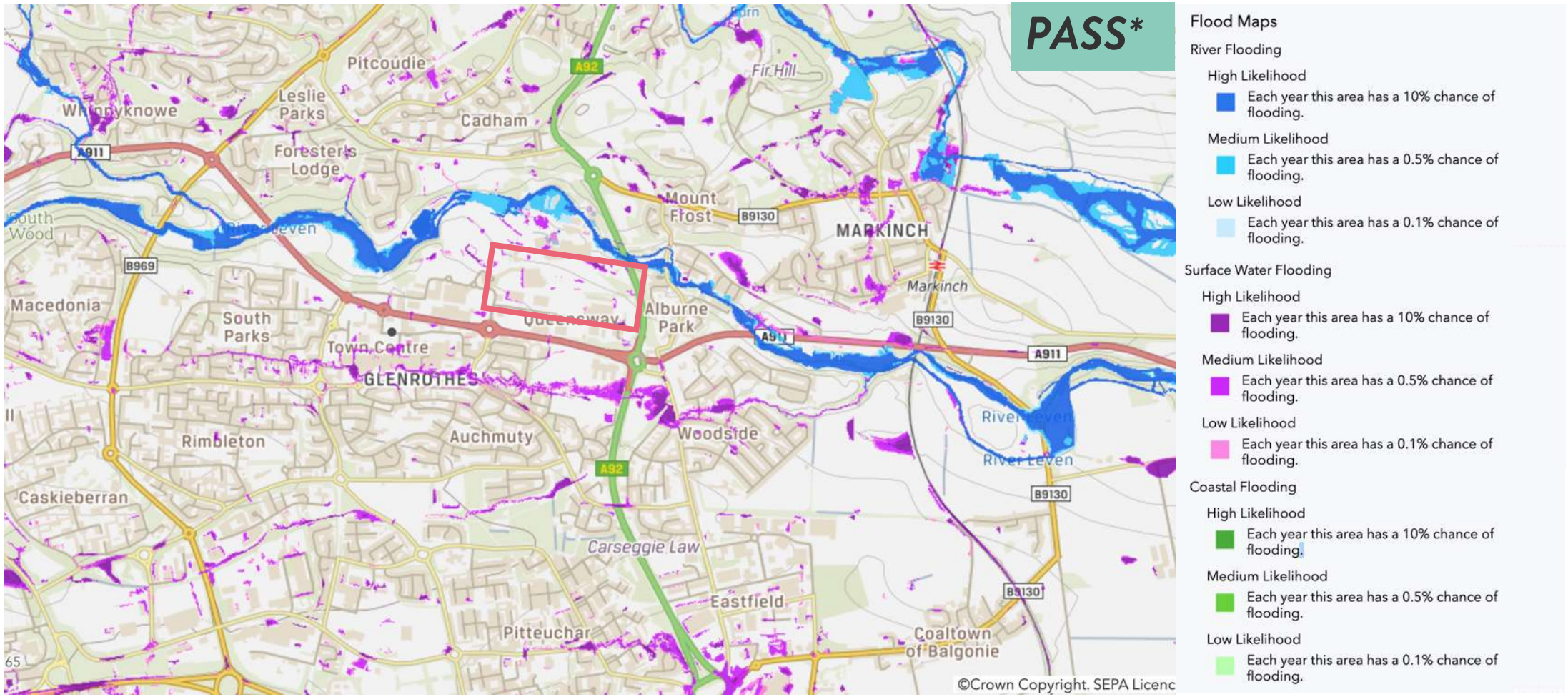
Nearby PoPs:

- Virgin Media PoP and BT OHP/Ethernet Node in Glenrothes

Note: Fibre routes are deduced from data available in the public domain.

QUEENSWAY PARK DATA CENTRES, GLENROTHES

FLOOD RISK ASSESSMENT



* Note, as part of site remediation completed in 2019, significant investment was made in a new surface water drainage network and sustainable urban drainage system (SUDS) reducing the level of any flood risk – TechRE assessment.

SHORTLIST

SCATSTA AIRPORT

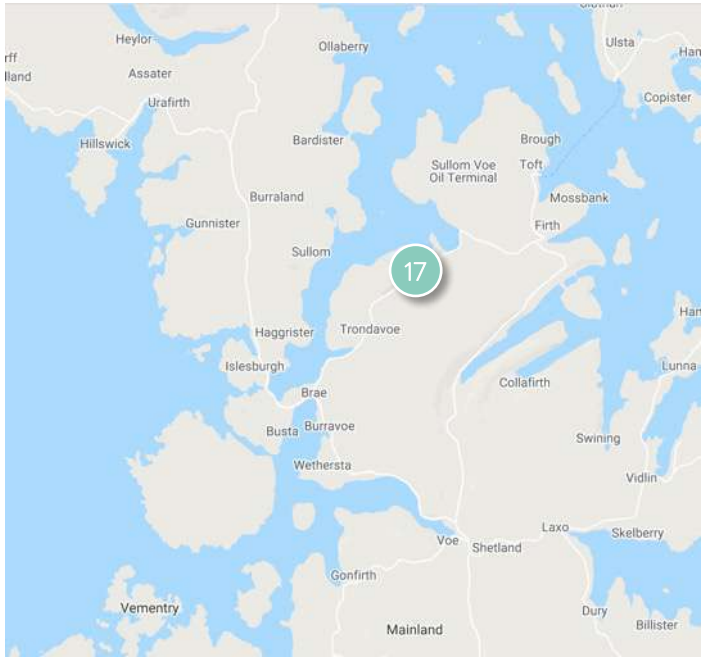
SHETLAND ISLANDS

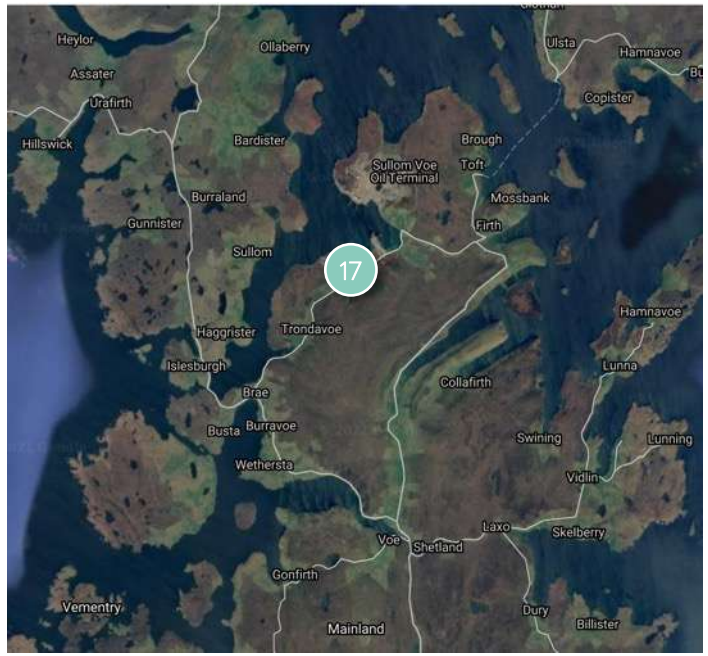
#SCOTLANDISNOW

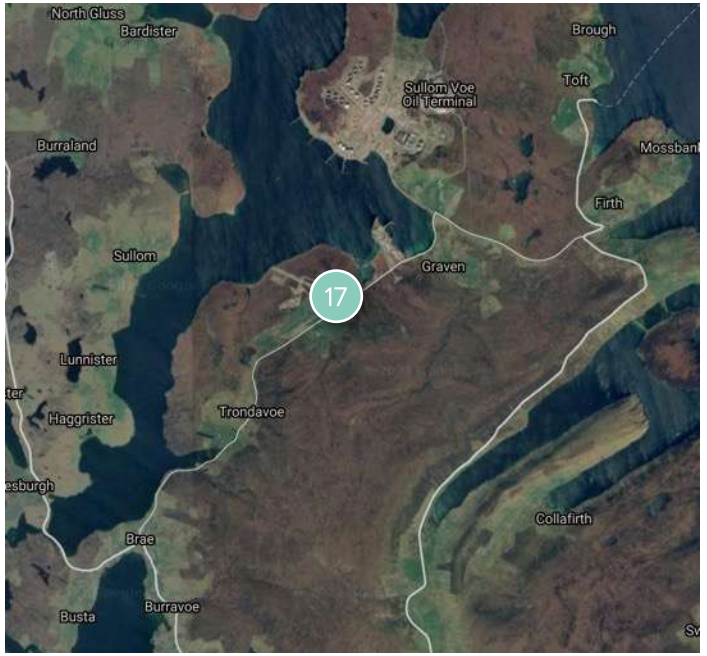
SCOTLAND

SCATSTA AIRPORT
OVERVIEW

Site Overview	Scatsca Airport is a decommissioned airport next to Sullom Voe Oil Terminal which closed in June 2020. It lies north of Viking onshore wind farm (443MW) currently under construction and south of the future Orion renewables project (providing 400-600MW)					
Position: Rural location but access to large renewables	Plot: 123 acres	Power: Plenty of green potential through onshore and offshore wind	Ping: Limited to Openreach and Shetland Telecom	Protection: Part of site being used for rocket testing but cold only	Programme: Vacant site ready for development	Proposition: Hyperscale / Cable Landing Station
TechRE Comments	This site offers easy data centre development with compatible industrial planning zoning. International connectivity is via Shefa and Faroes cables. Sullom Voe oil terminal (upper tier COMAH site) is slowly being decommissioned and is > 3km away so is therefore considered less of a hazard.					





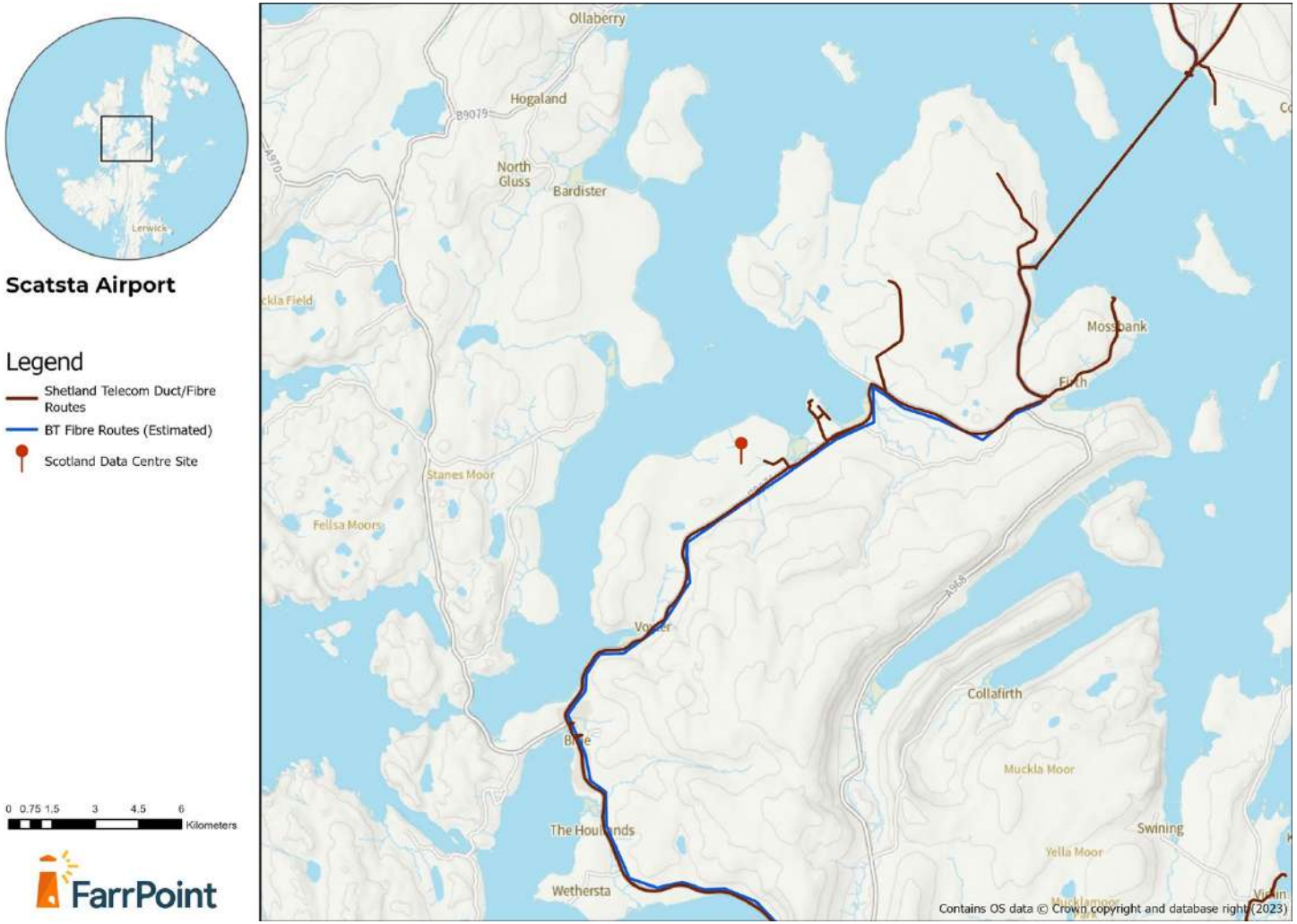


SCATSTA AIRPORT

IMAGES

SCATSTA AIRPORT

FIBRE



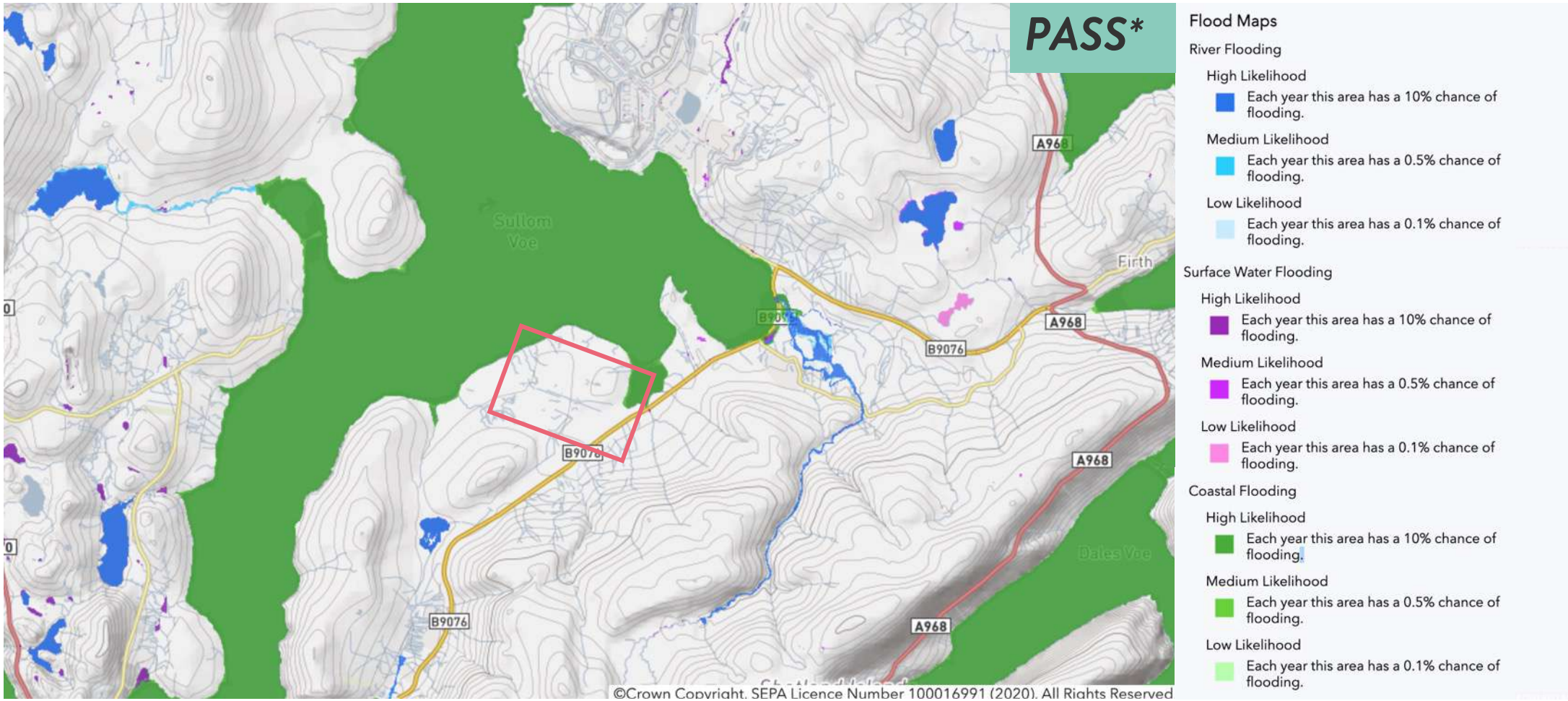
Notes

- Shetland Telecom fibre/duct to the site
- Close to estimated Openreach fibre route

Note: Fibre routes are deduced from data available in the public domain

SCATSTA AIRPORT

FLOOD RISK ASSESSMENT



*TechRE assessment

SHORTLIST

WESTFIELD PARK

BALLINGRY, FIFE

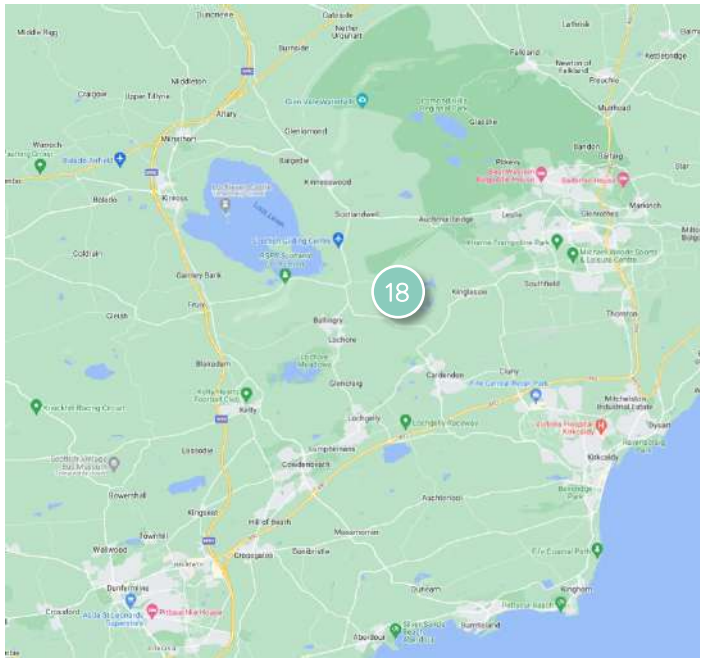
#SCOTLANDISNOW

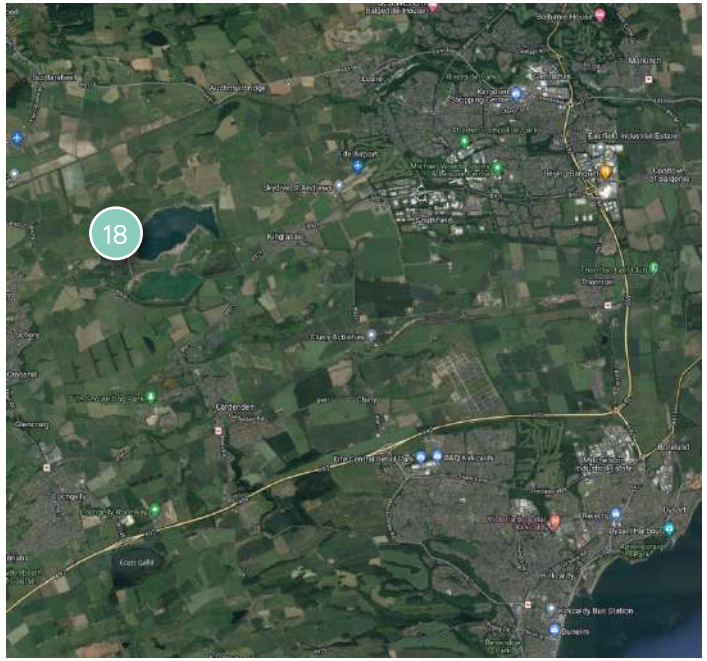
SCOTLAND

WESTFIELD PARK, FIFE

OVERVIEW

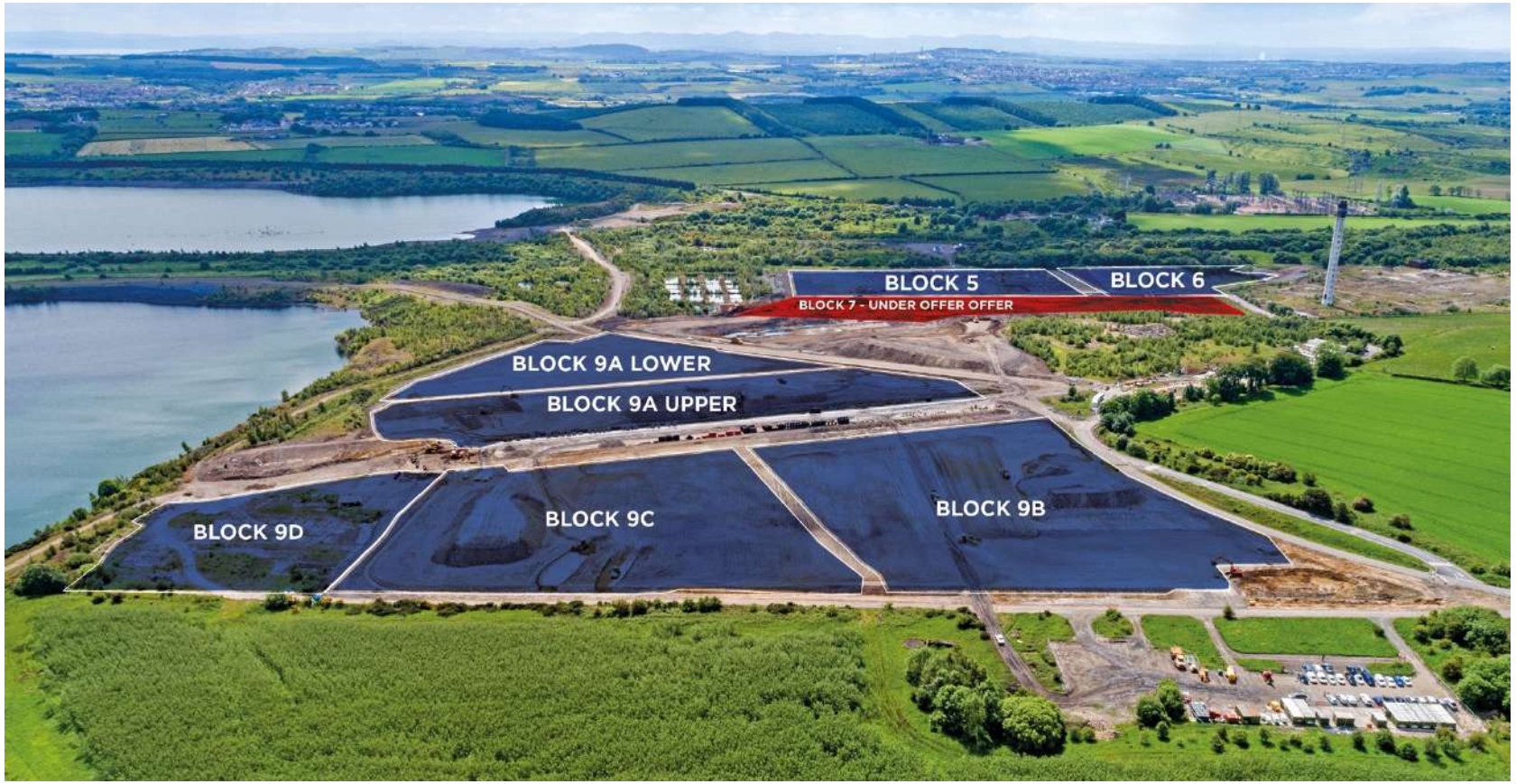
Site Overview	A former open cast mine with good access to the A92 and the M90 suitable for industrial uses requiring significant energy provision.					
Position: 25 km north of Edinburgh >0.5M pop. within 40km	Plot: 45 acres in total with further areas potentially available	Power: 22MW EfW plant under construction & consent for 30MW solar	Ping: Limited fibre providers	Protection: Land contamination issues need careful assessment	Programme: EfW plant ready by 2025.	Proposition: Urban colocation use
TechRE Comments	Power can be supplied direct from the EfW plant plus the potential of significant power from nearby wind farms makes this an attractive proposition. However, more fibre infrastructure is required.					





WESTFIELD PARK, FIFE

IMAGES



WESTFIELD PARK, FIFE

IMAGES

WESTFIELD PARK, FIFE

FIBRE

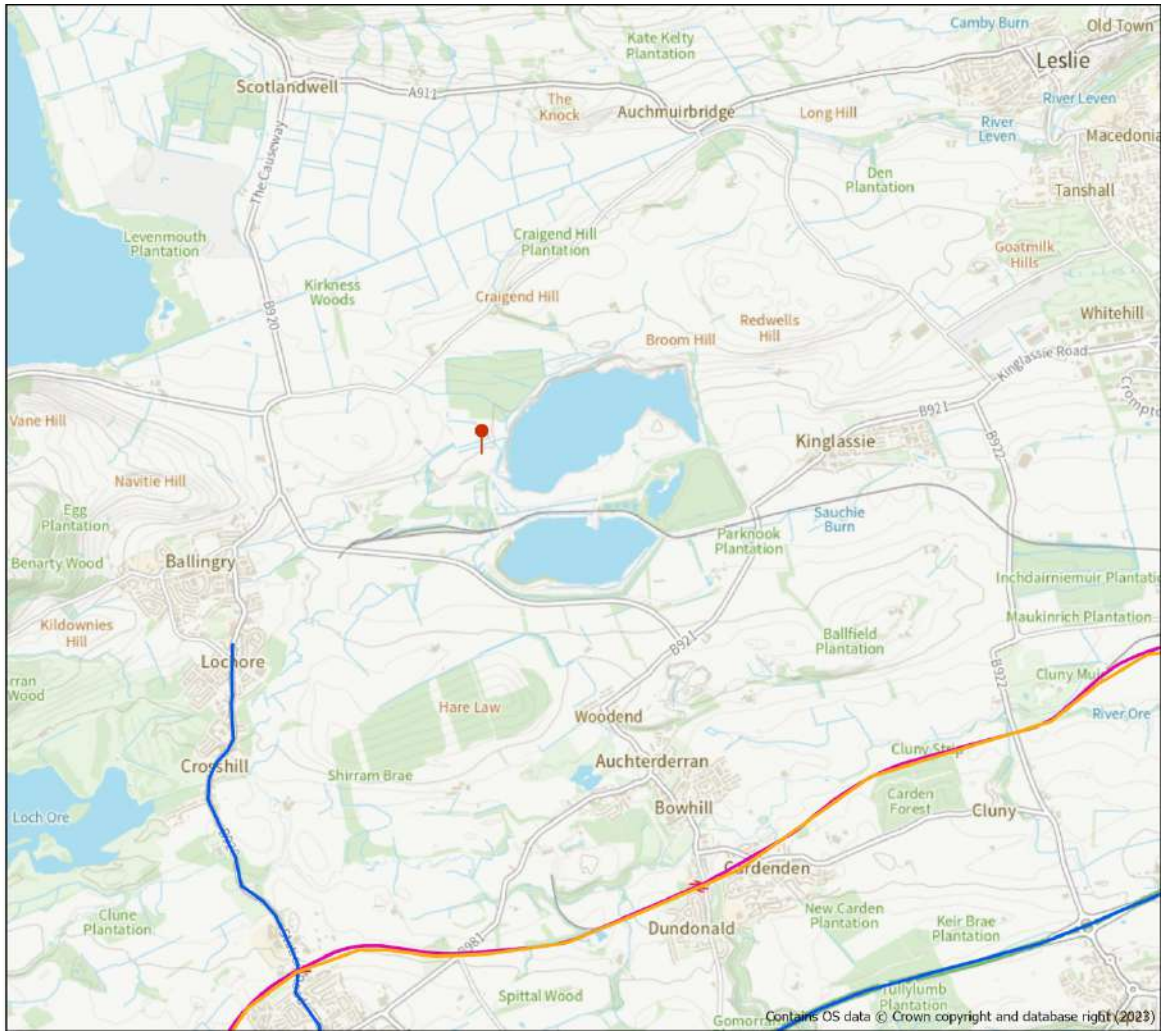
Westfield Park, Fife

Legend

- Neos Network (Estimated)
- Lumen Fibre Network (Estimated)
- BT Fibre Routes (Estimated)
- Scotland Data Centre Site Shortlist

0 0.38 0.75 1.5 2.25 3 Kilometers

FarrPoint



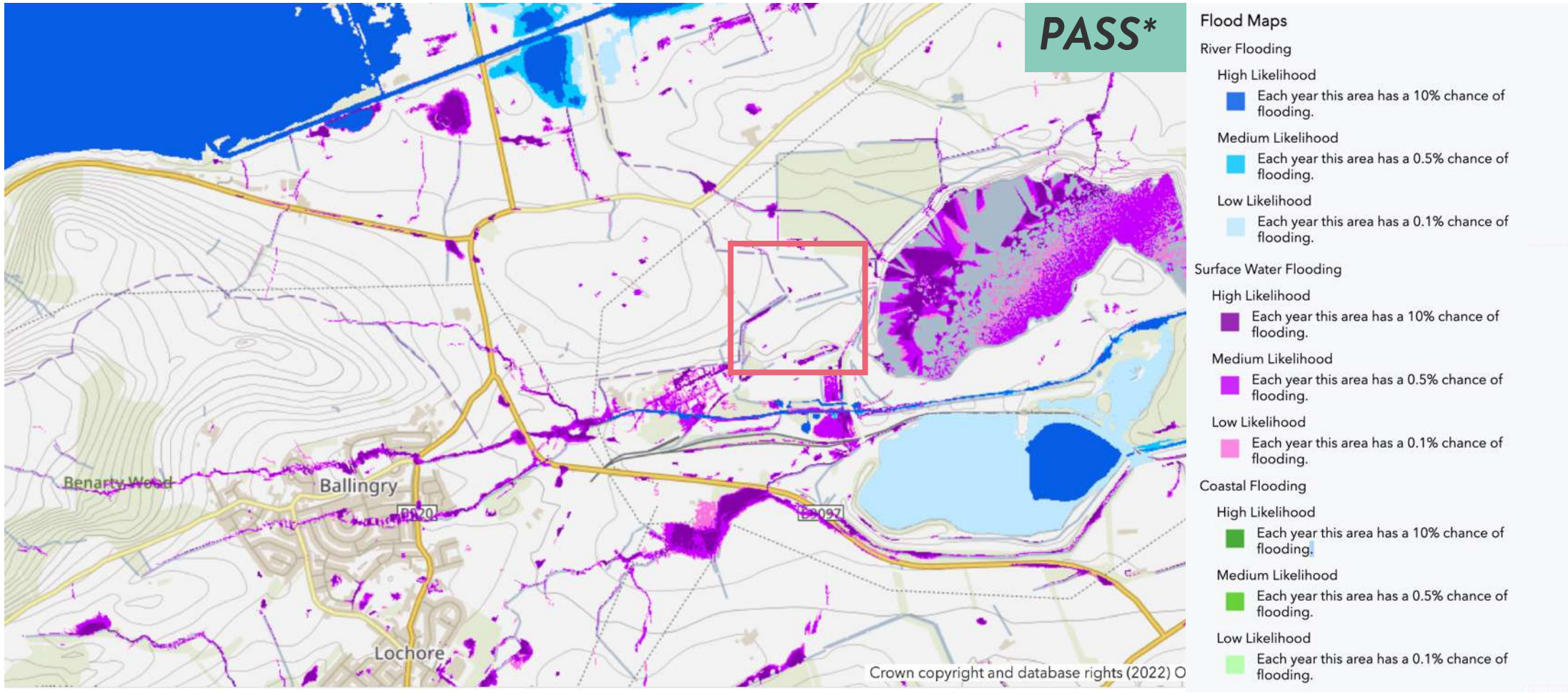
Notes

- Openreach fibre route in the vicinity
- Lumen and Neos routes also nearby

Note: Fibre routes are deduced from data available in the public domain.

WESTFIELD PARK, FIFE

FLOOD RISK ASSESSMENT



*TechRE assessment

SHORTLIST

WHITECROSS

LINLITHGOW, FALKIRK

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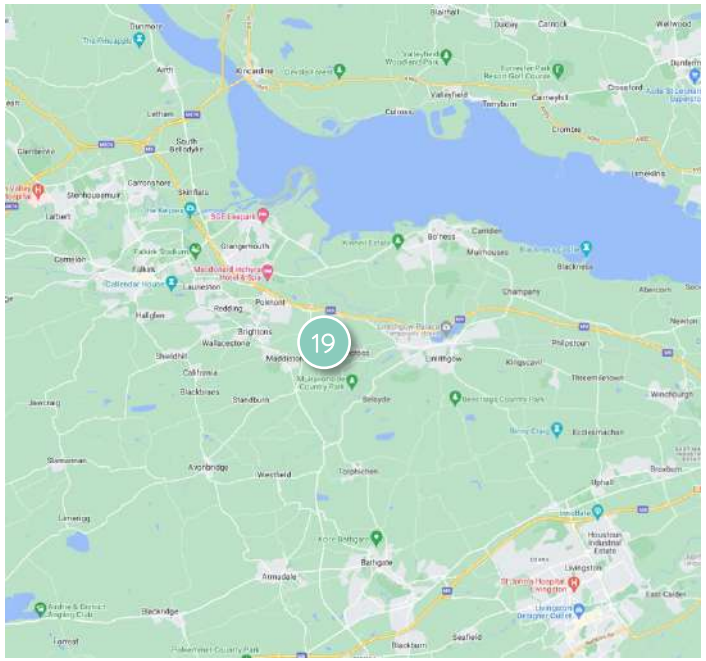
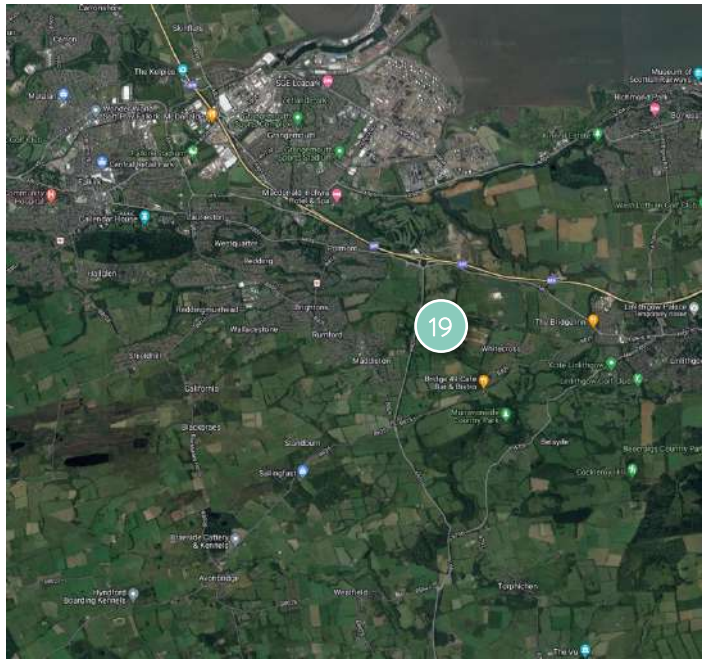
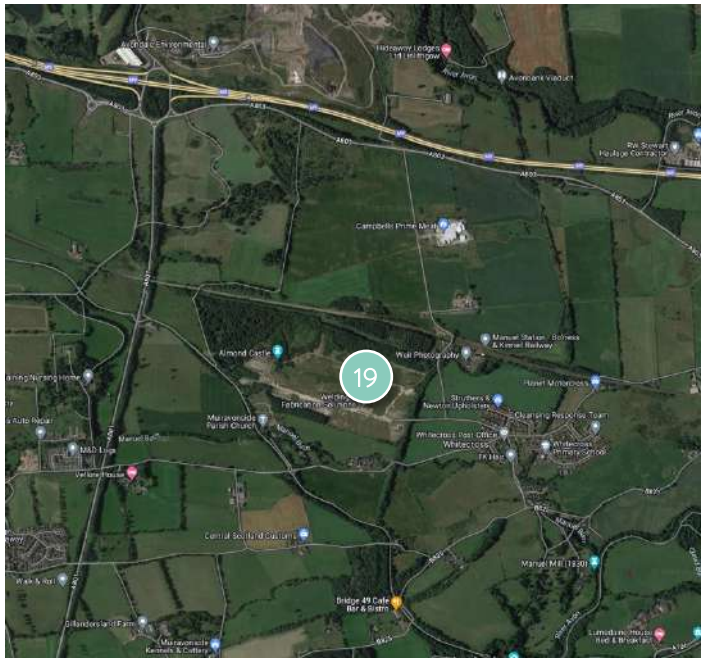
WHITECROSS INNOVATION PARK, LINLITHGOW

OVERVIEW

Site Overview	An old brickworks site that has been demolished and decontaminated.					
Position: Near the Central Belt ~1M pop within 40 km	Plot: 77 acres reserved for data centre campus	Power: 35MW planned from Grangemouth grid (2025) & solar potential	Ping: Limited fibre providers	Protection: Land contamination issues need careful assessment	Programme: Site preparation in progress.	Proposition: Hyperscale or urban colocation use
TechRE Comments	A 30MW data centre campus is being planned for the site which the owners believe could be expandable to 100MW in 5-8 years. Excellent strategic location between Glasgow and Edinburgh. Plans for a solar array within the site as well as for a larger solar scheme on adjoining land to the north.					





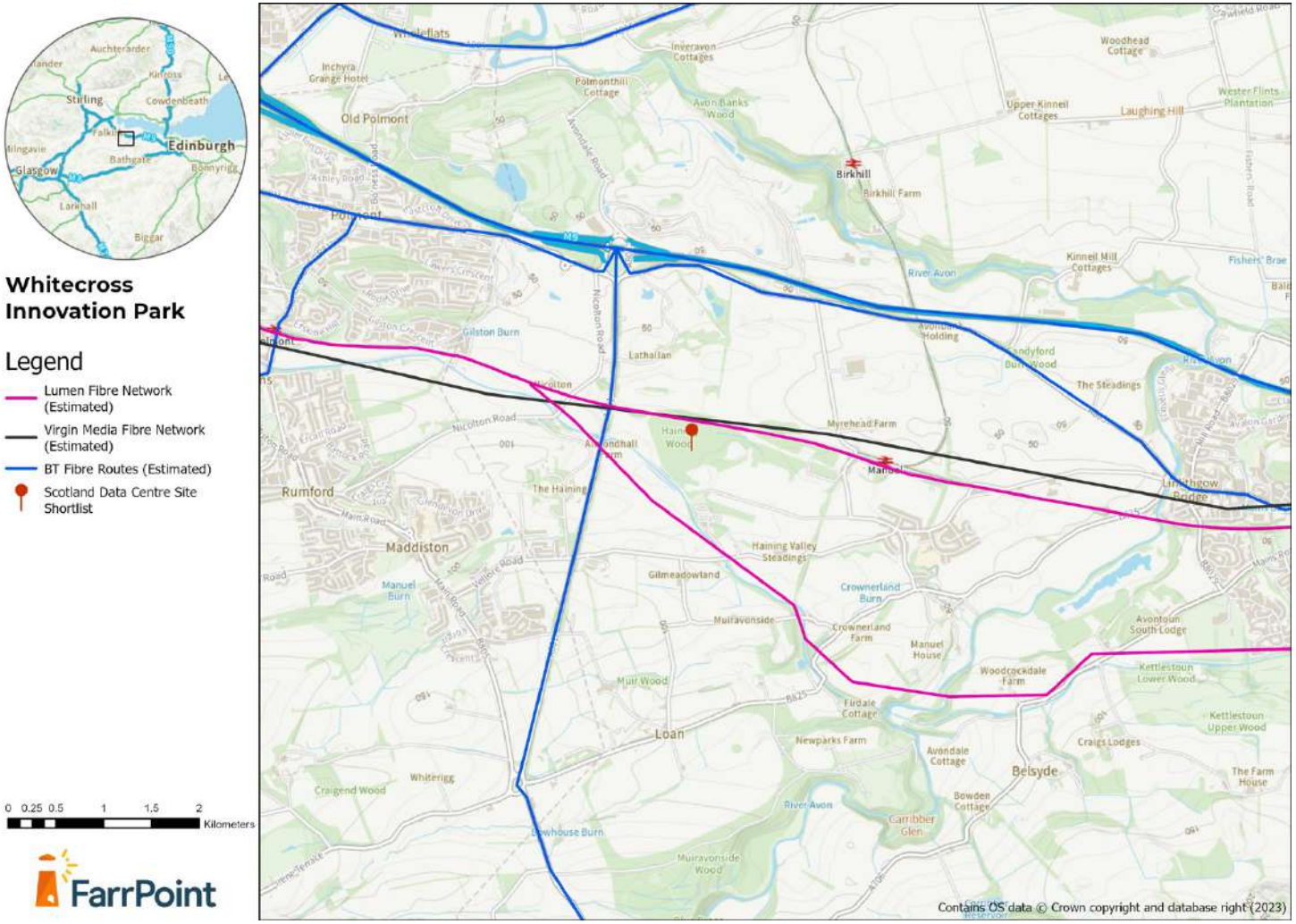


WHITECROSS INNOVATION PARK, LINLITHGOW

IMAGES

WHITECROSS INNOVATION PARK

FIBRE



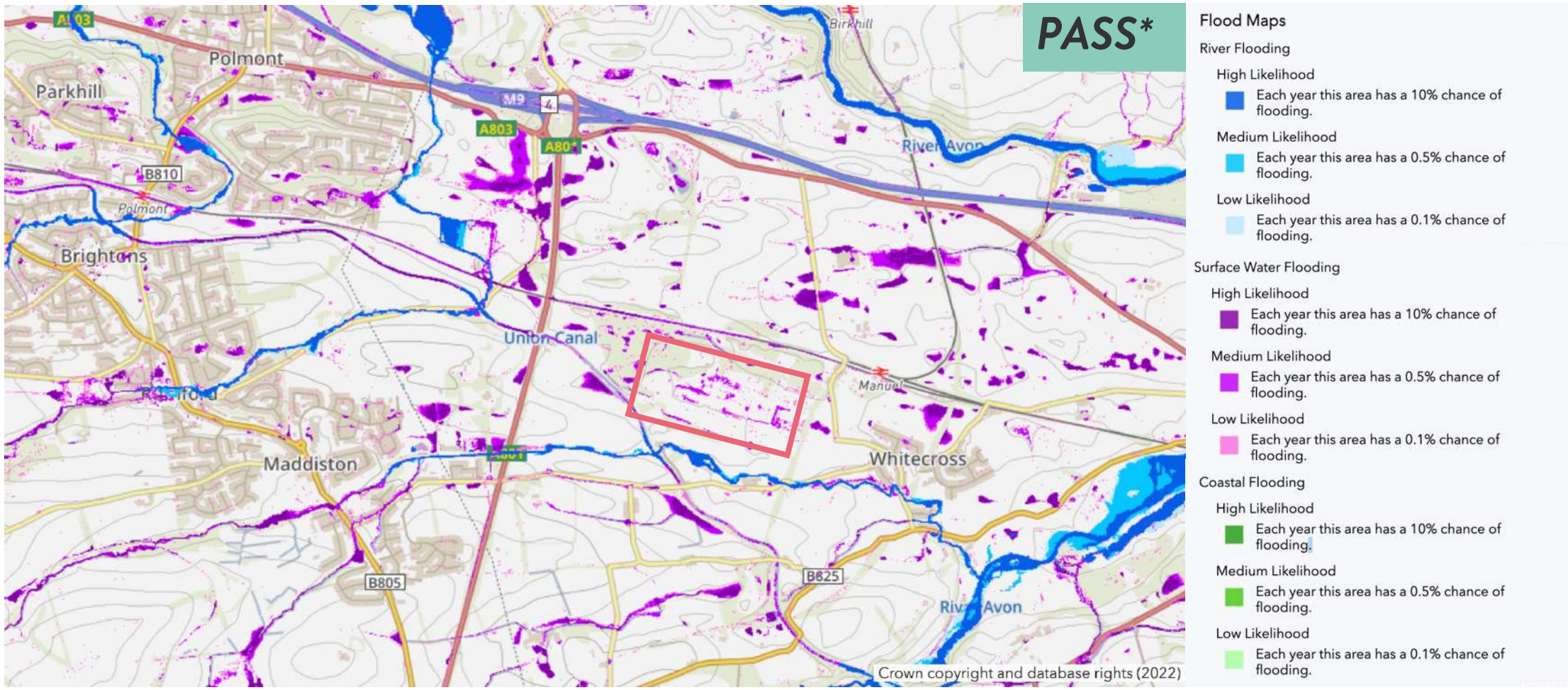
Notes

- Openreach fibre route in the vicinity
- Lumen Fibre Network in the vicinity

Note: Fibre routes are deduced from data available in the public domain.

WHITECROSS INNOVATION PARK, LINLITHGOW

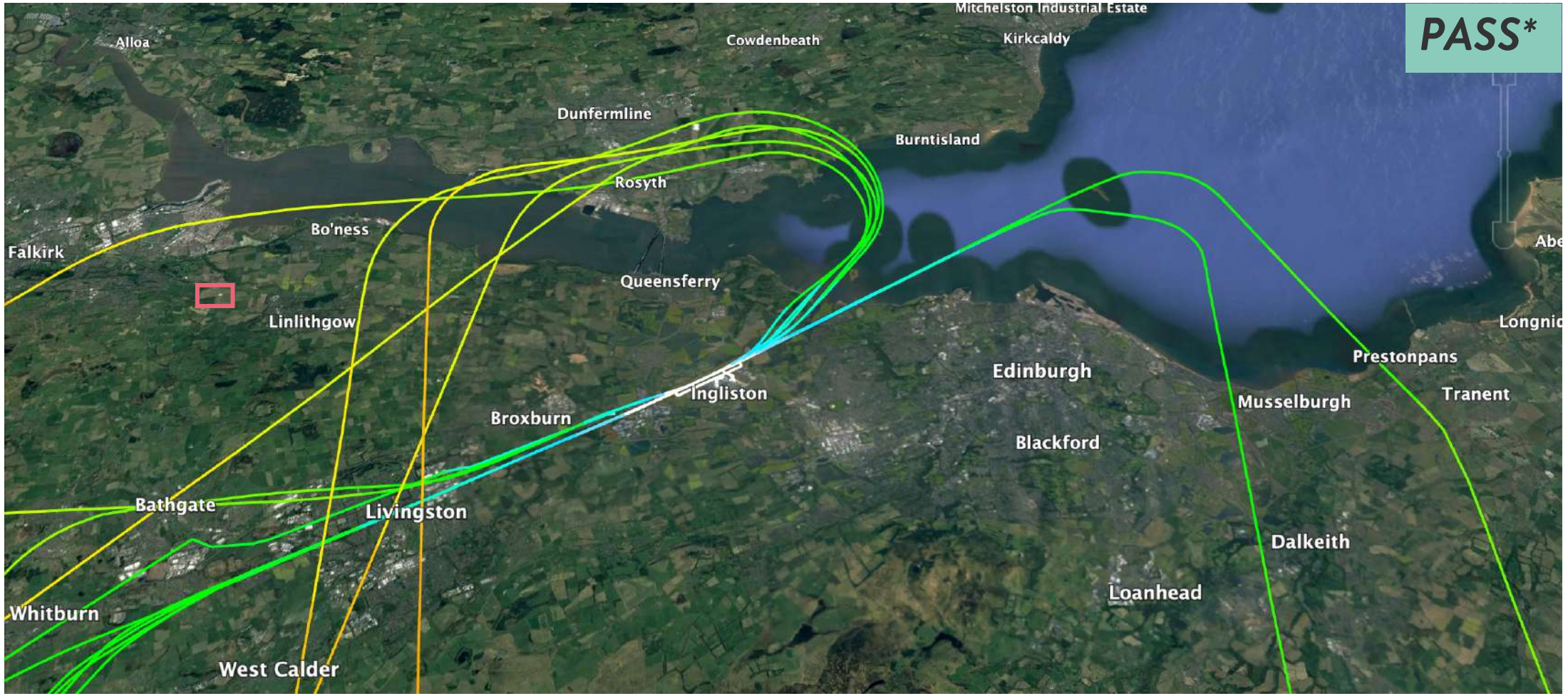
FLOOD RISK ASSESSMENT



*TechRE assessment

WHITECROSS INNOVATION PARK, LINLITHGOW

FLIGHT PATH ASSESSMENT



*TechRE assessment

SHORTLIST

ZERO FOUR

MONTROSE, ANGUS

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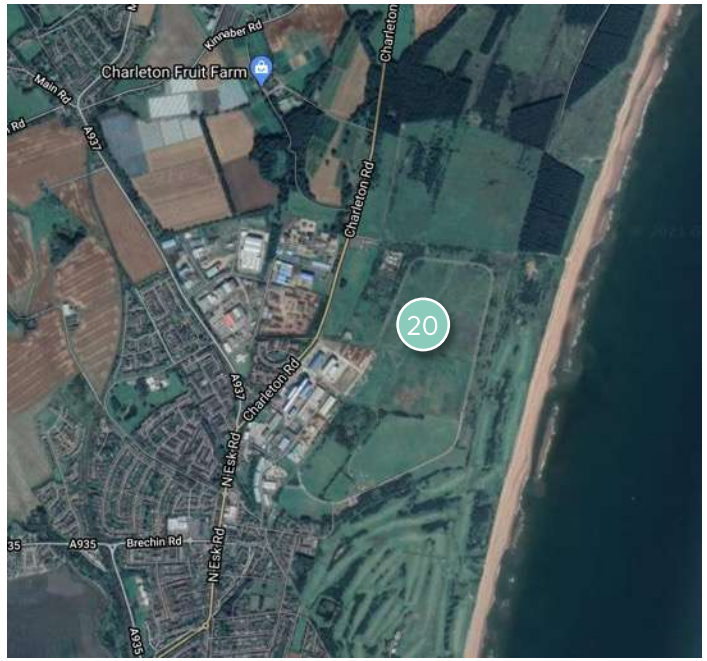
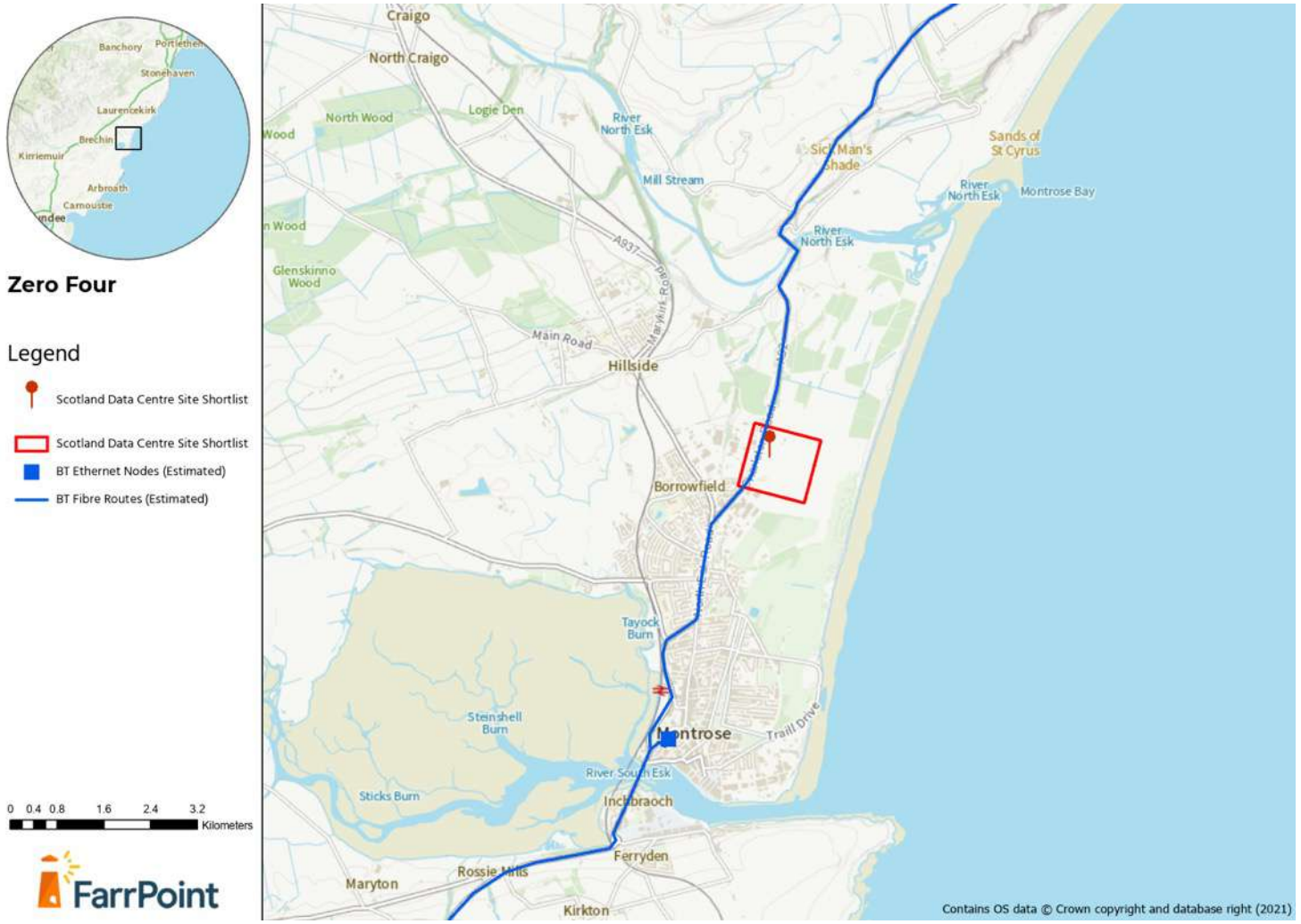
ZERO FOUR
OVERVIEW

Site Overview	Currently a greenfield site, Zero Four is a planned business park in Montrose which is entirely renewables lead. A former airfield site, Zero Four is envisaged as a hub for the blue and green economies, particularly the offshore wind operators, supply chain and support services. Delivery is by Crown Estates Scotland.					
Position: Rural location but access to large scale renewables	Plot: 123 Acres	Power: 1.5 GW from offshore wind. Other green options	Ping: Limited to Openreach	Protection: No hazards observed	Programme: Site works planned for late 2023 with availability in 2024	Use: Hyperscale
TechRE Comments	Montrose is of particular significance due to SSE's Seagreen windfarm lying 27km off the coast which is expected to be fully operational by Q2 2023. SSE has already announced the town will be the commercial base for Scotland's largest windfarm to date. However, more terrestrial fibre will be needed to develop the site.					



ZERO FOUR
IMAGES

ZERO FOUR
FIBRE



Notes

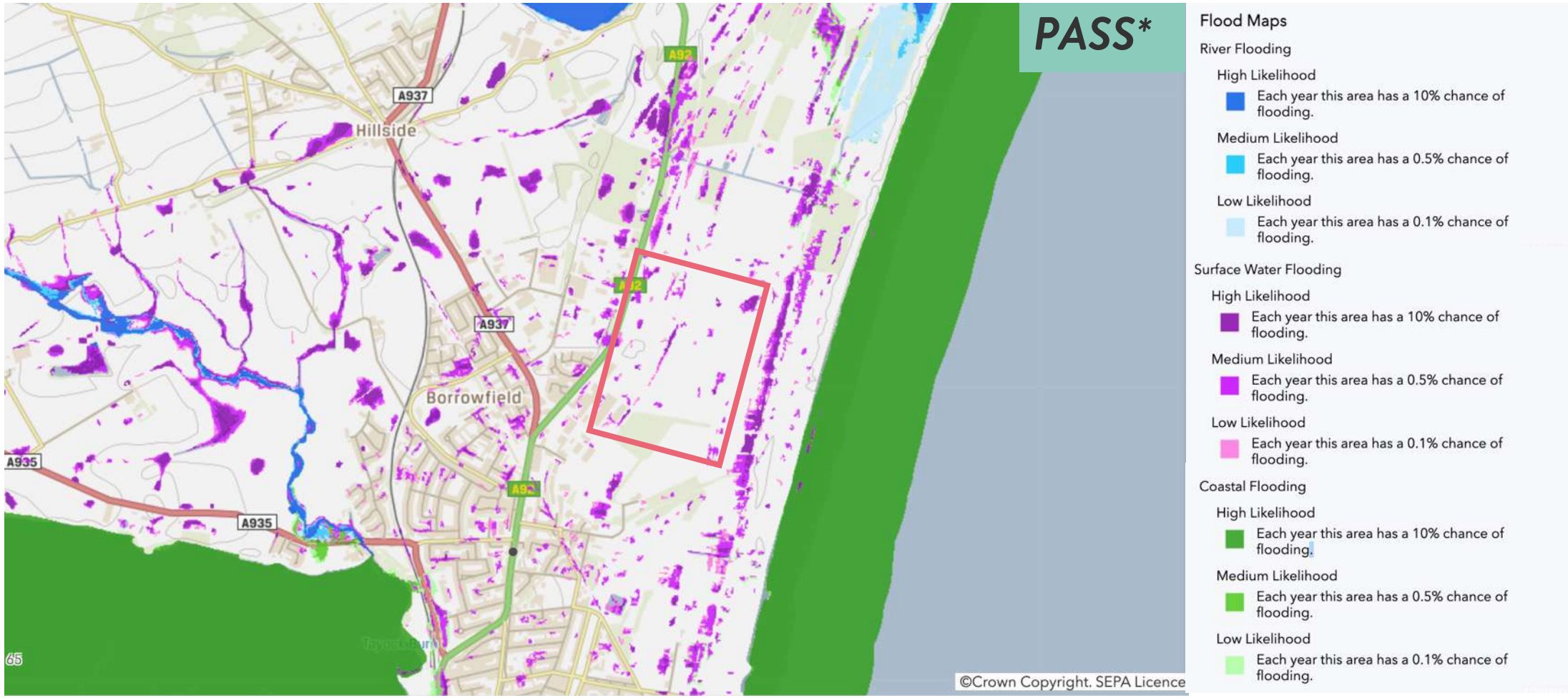
- Openreach fibre route in the vicinity

Nearby PoPs:

- BT OHP/Ethernet Node in Montrose

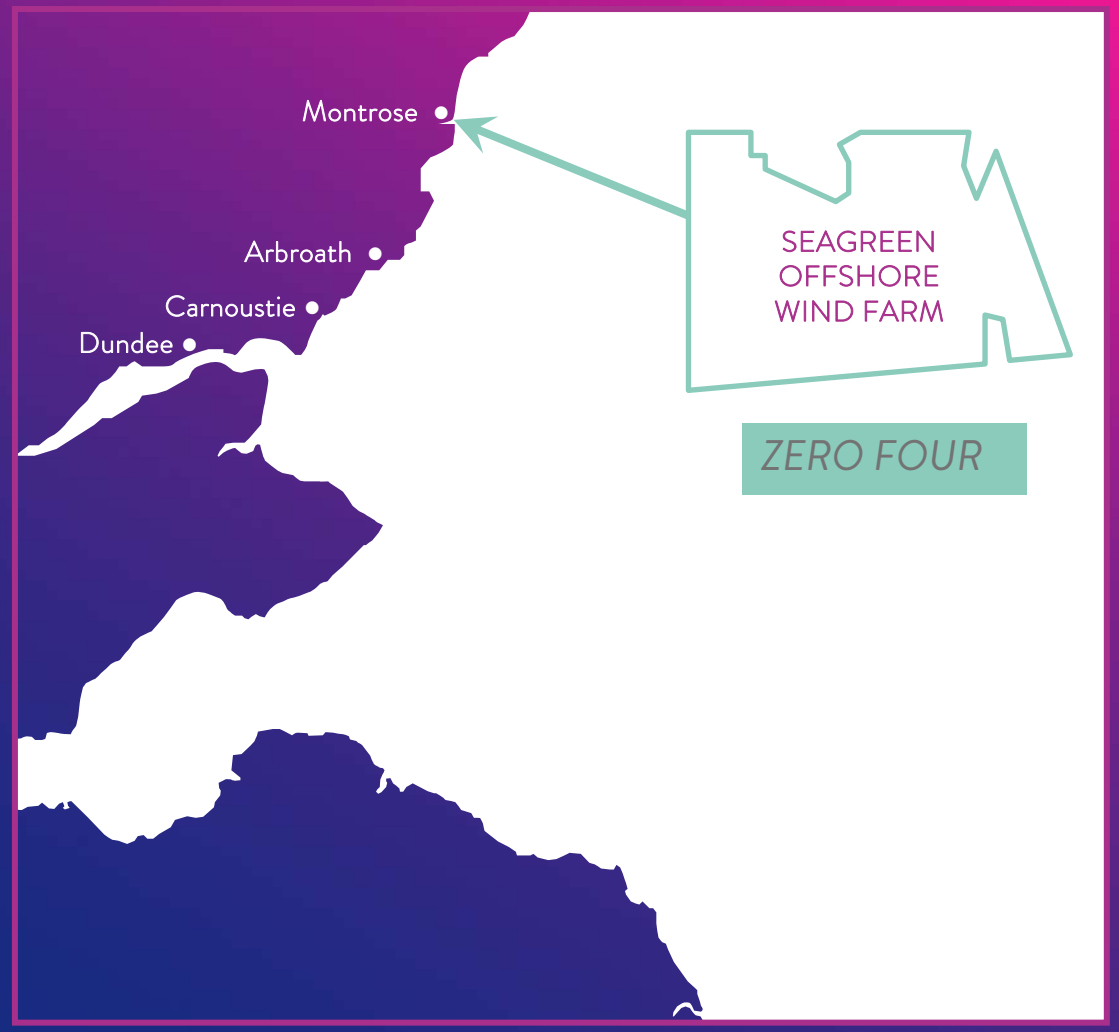
Note: Fibre routes are deduced from data available in the public domain.

ZERO FOUR
FLOOD RISK ASSESSMENT

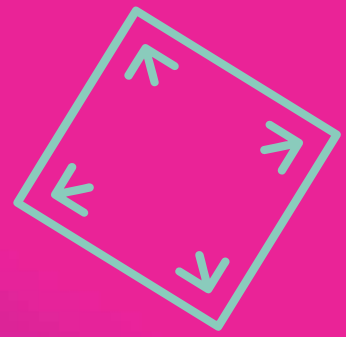


*TechRE assessment

ZERO FOUR
POWER



POTENTIAL CAPACITY
UP TO **1.5GW**



DISTANCE FROM SHORE
27KM APPROX.
FROM ANGUS COASTLINE AT ITS NEAREST POINT

*Note, information provided by Crown Estates

DATA CENTRE SITE DEVELOPMENT STUDY

Appendix 1: Strategic Heat Mapping

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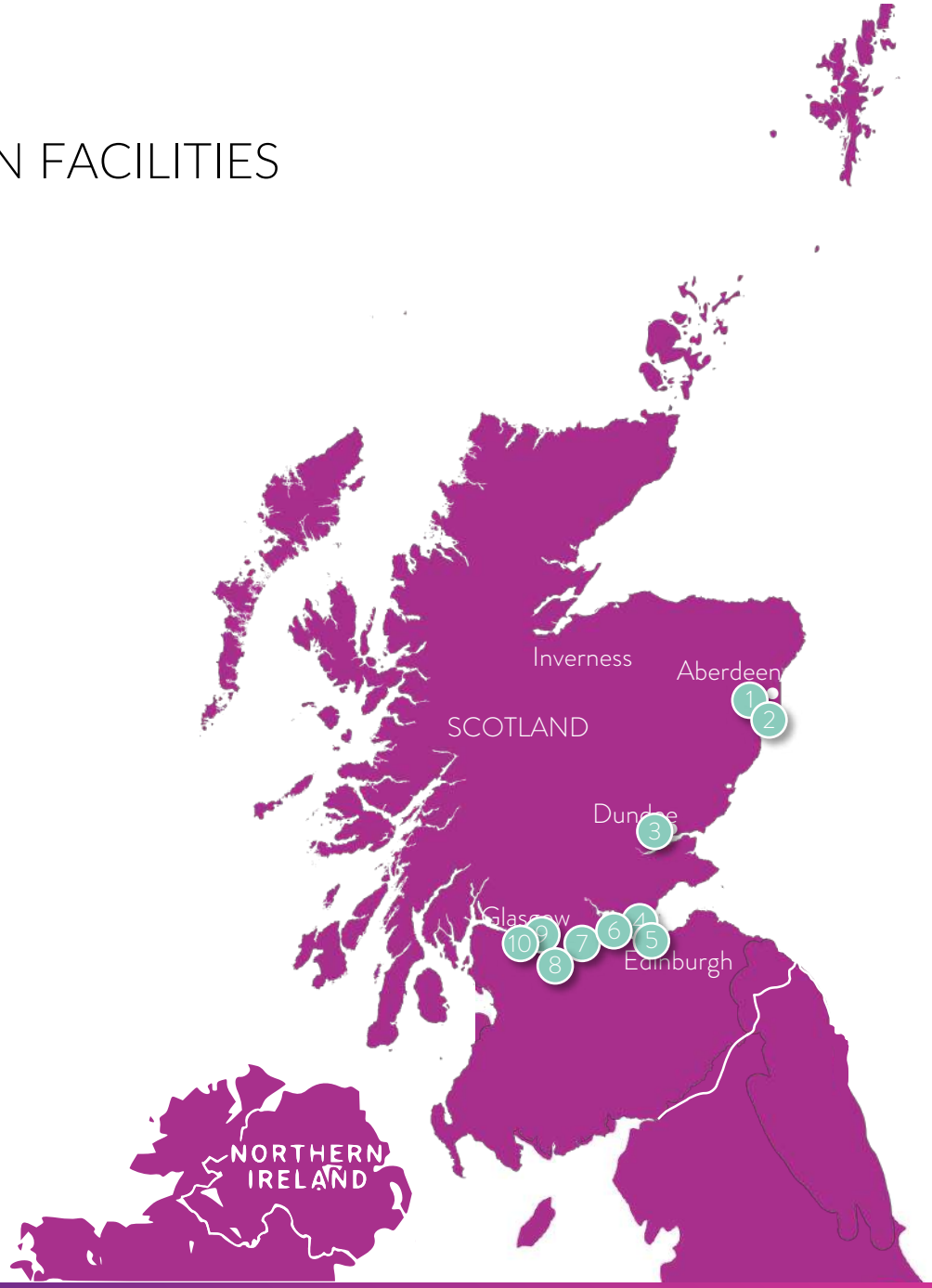
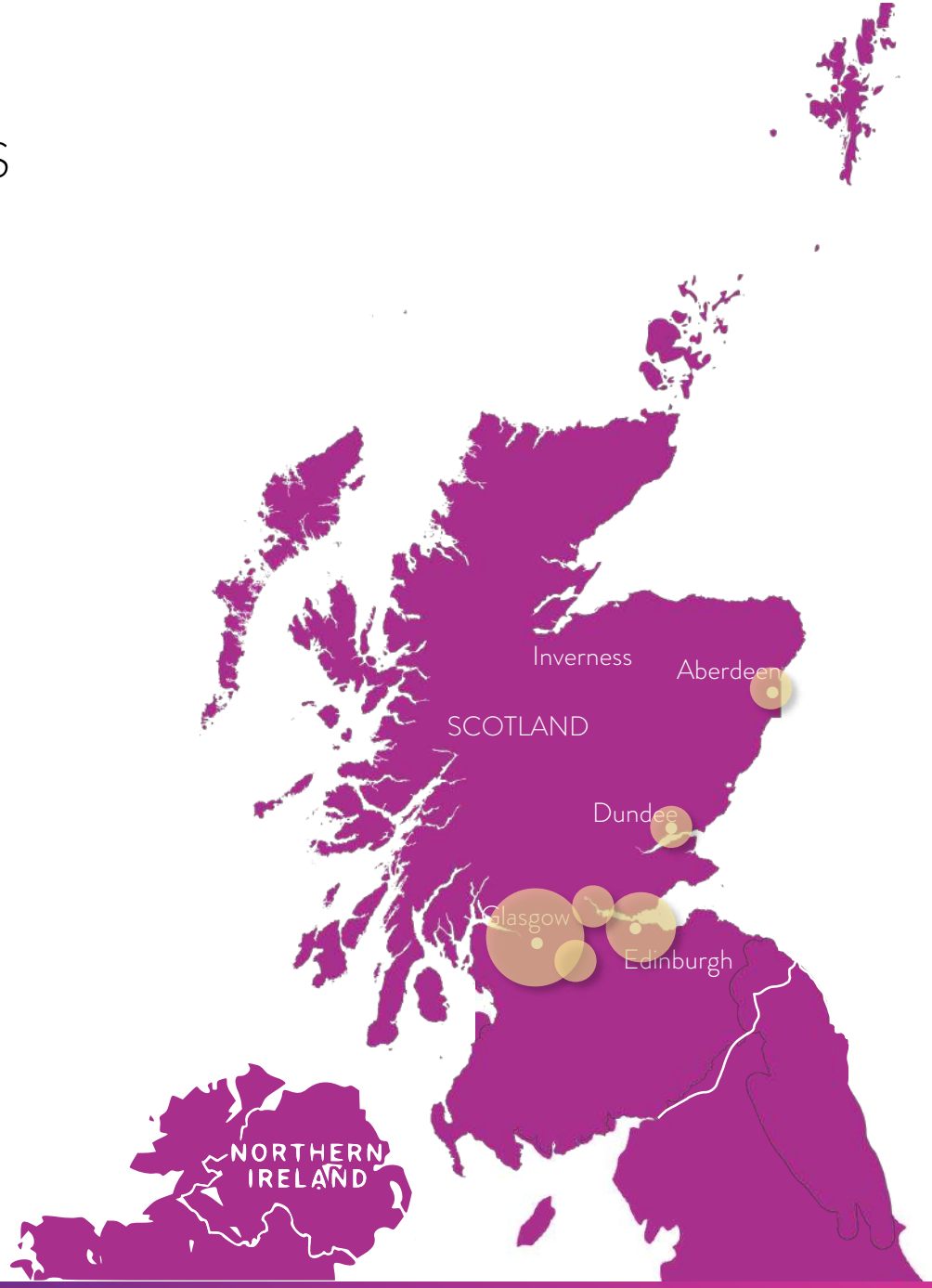
HEAT MAPPING

EXISTING COLOCATION FACILITIES

1. Brightsolid Aberdeen
2. IFB
3. Brightsolid Dundee
4. Pulsant South Gyle
5. Pulsant Edinburgh Medway
6. Pulsant Newbridge
7. Data Vita Chapel Hall
8. Asanti Hamilton
9. Data Vita Glasglow
10. Iomart DC1



HEAT MAPPING
POPULATION CENTRES



Key:

100,000 – 250,000 population

250,000 – 1M population

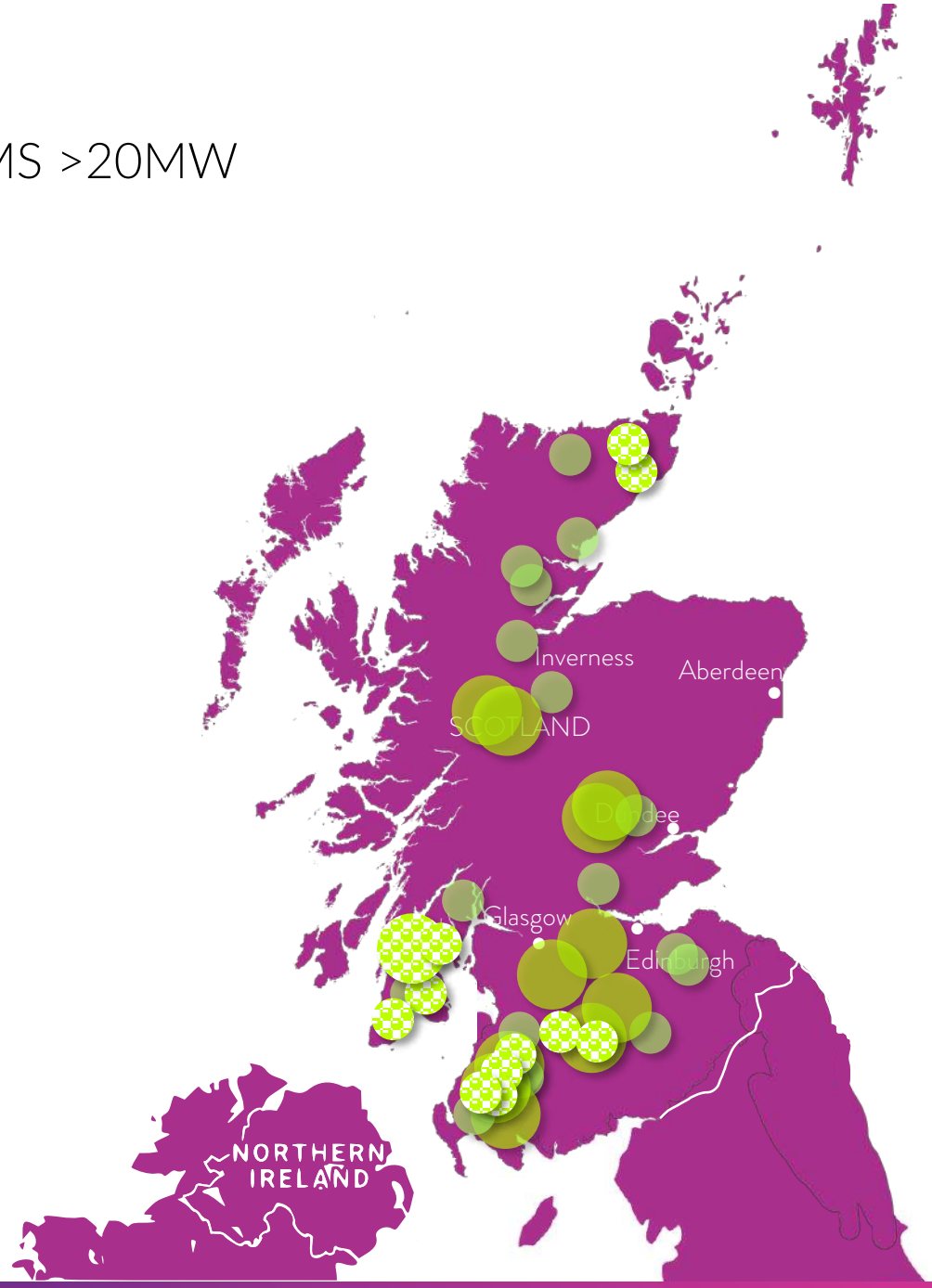
>1M population

HEAT MAPPING

POPULATION DISTRIBUTION

HEAT MAPPING

ONSHORE WIND FARMS >20MW

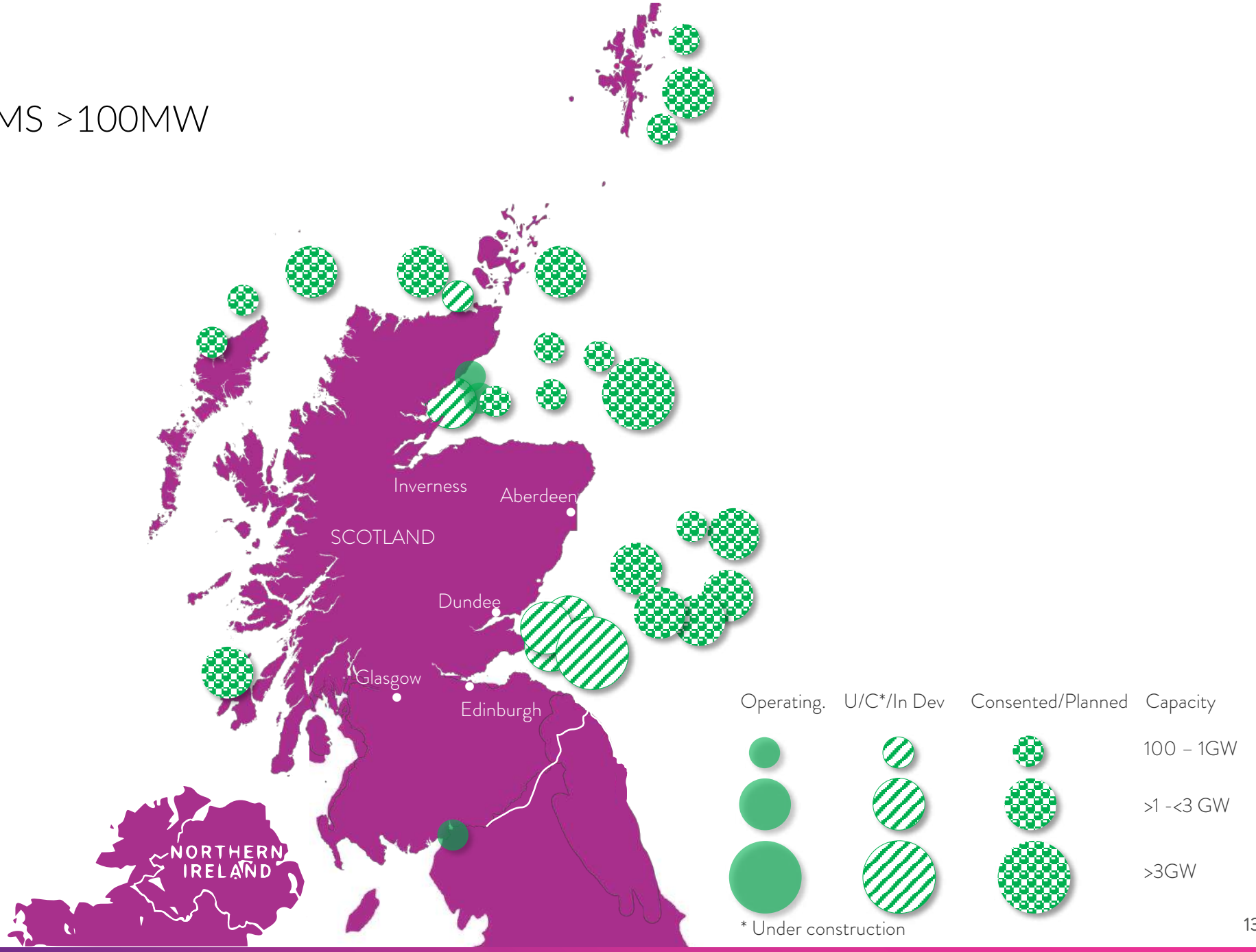


Operating	U/C* / In Dev	Capacity
		20 - 100 MW
		100MW – 1GW

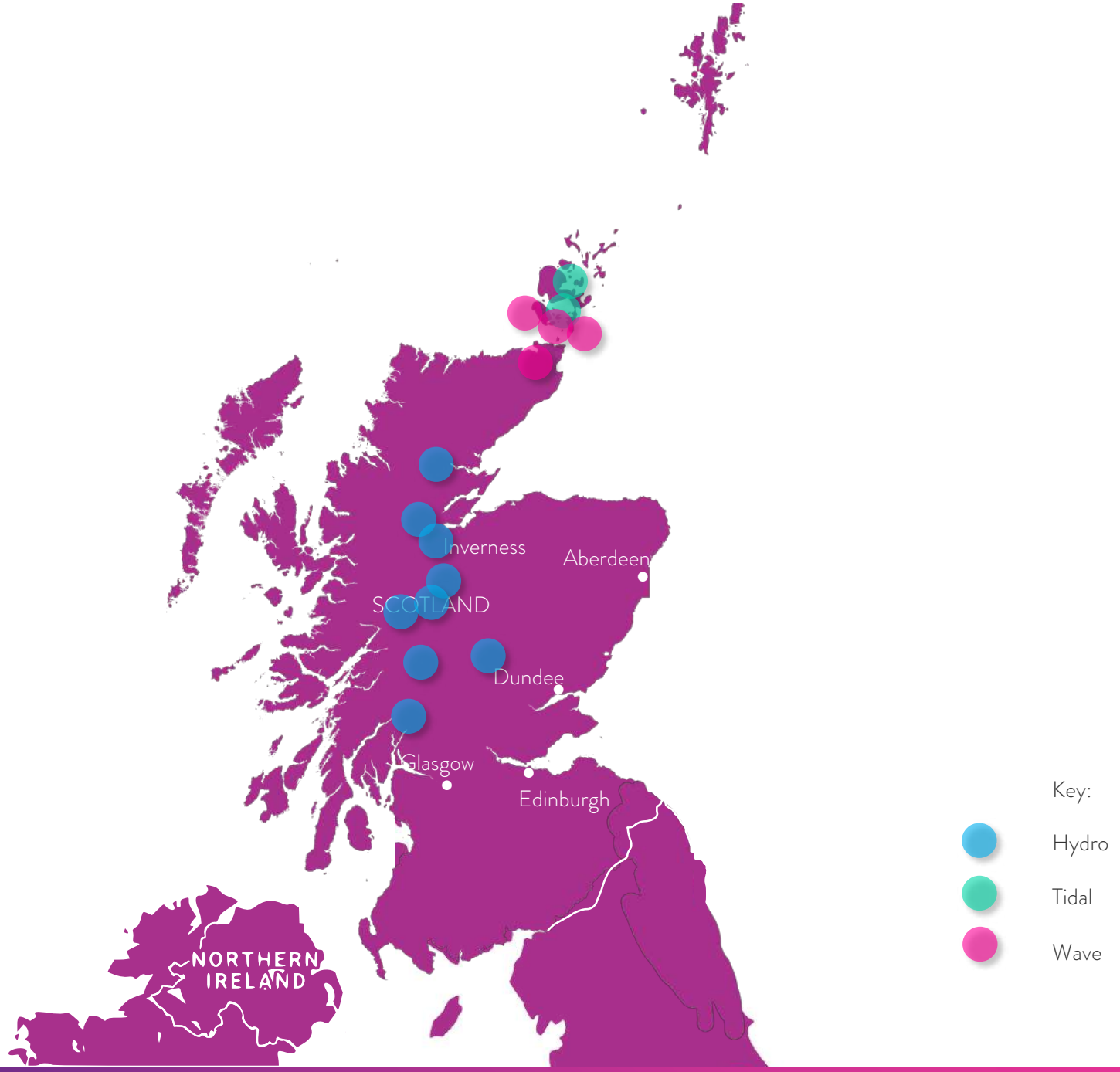
* Under construction

HEAT MAPPING

OFFSHORE WIND FARMS >100MW

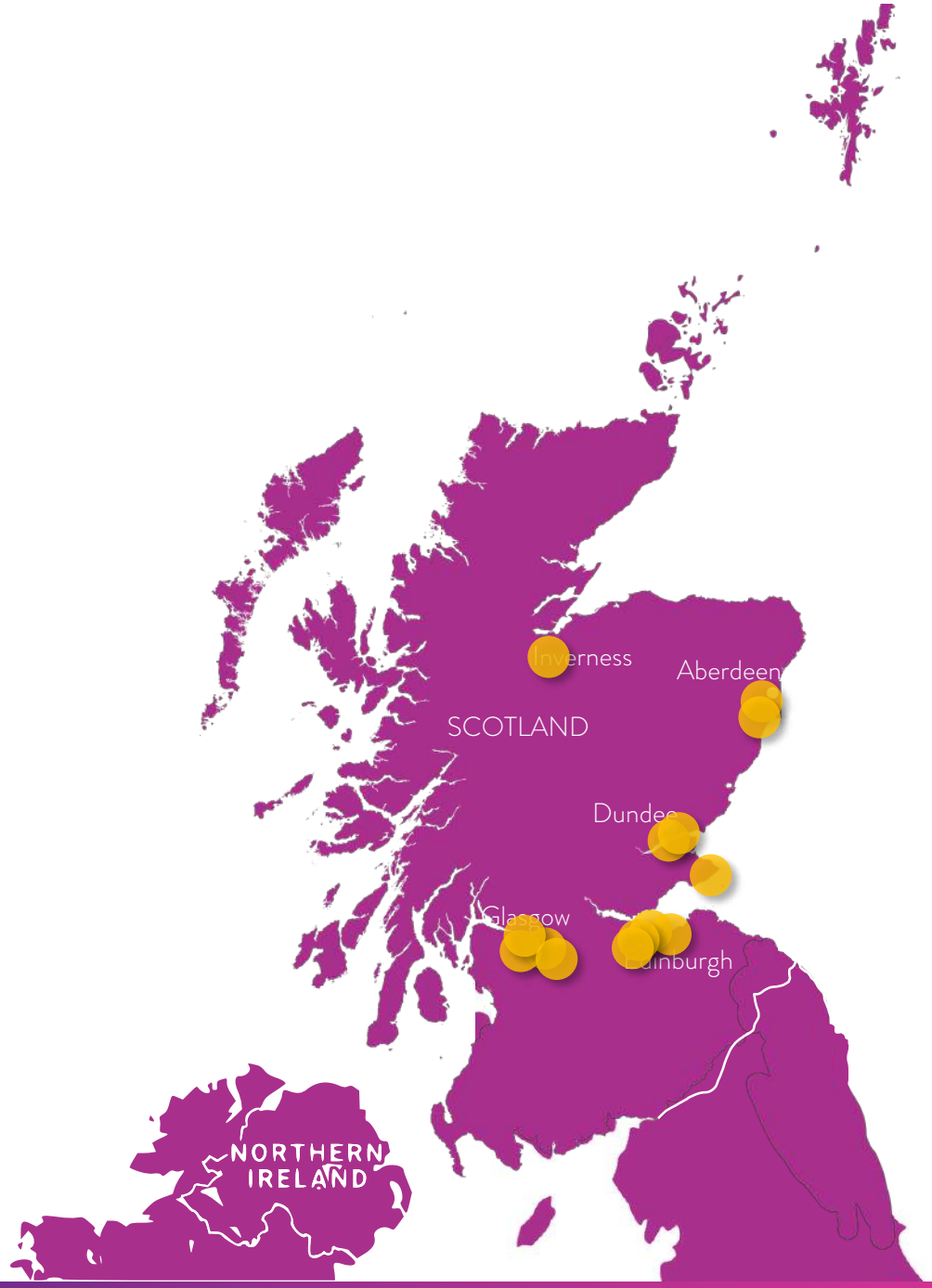


HEAT MAPPING
OTHER RENEWABLES



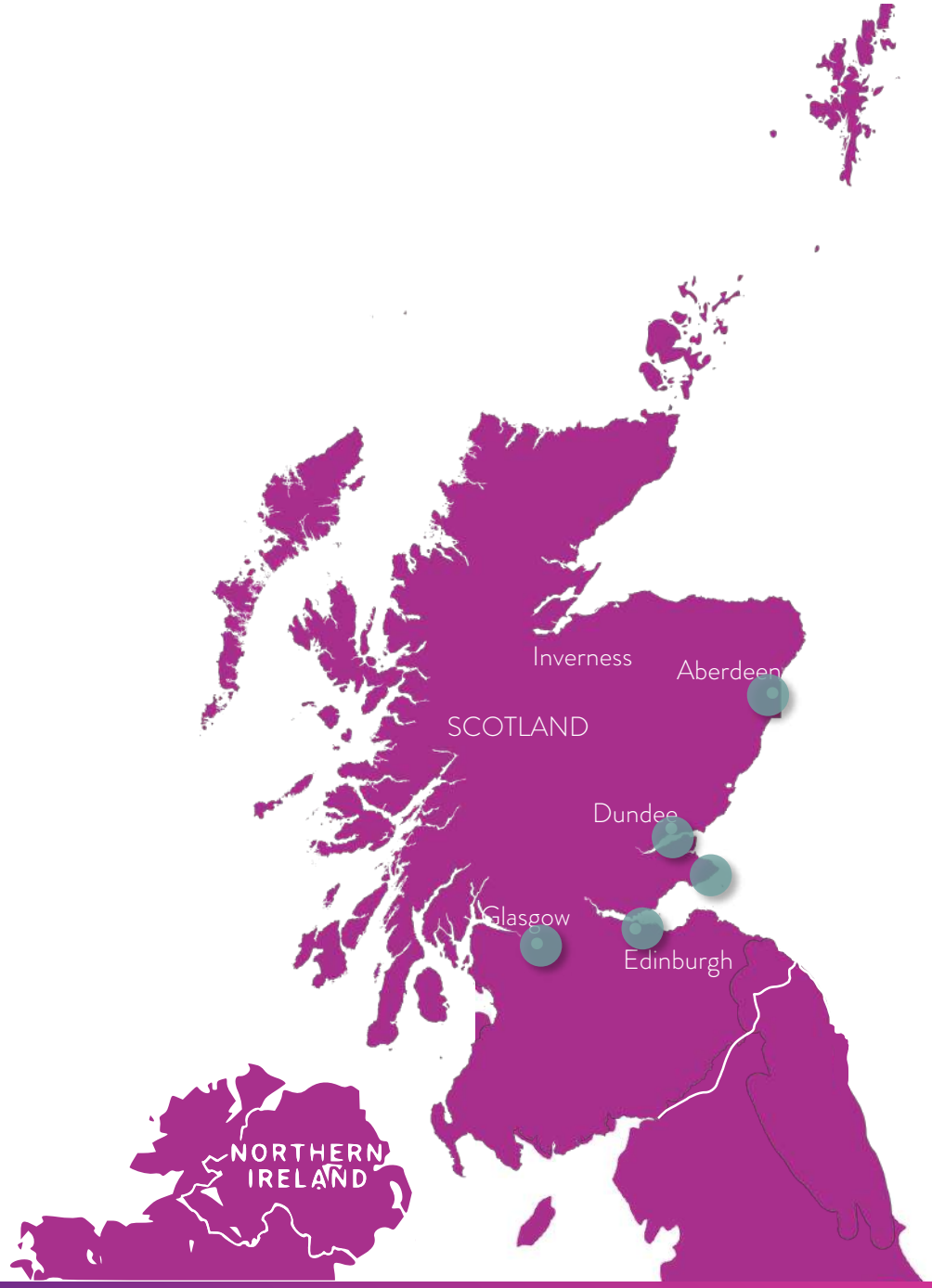
HEAT MAPPING

UNIVERSITIES



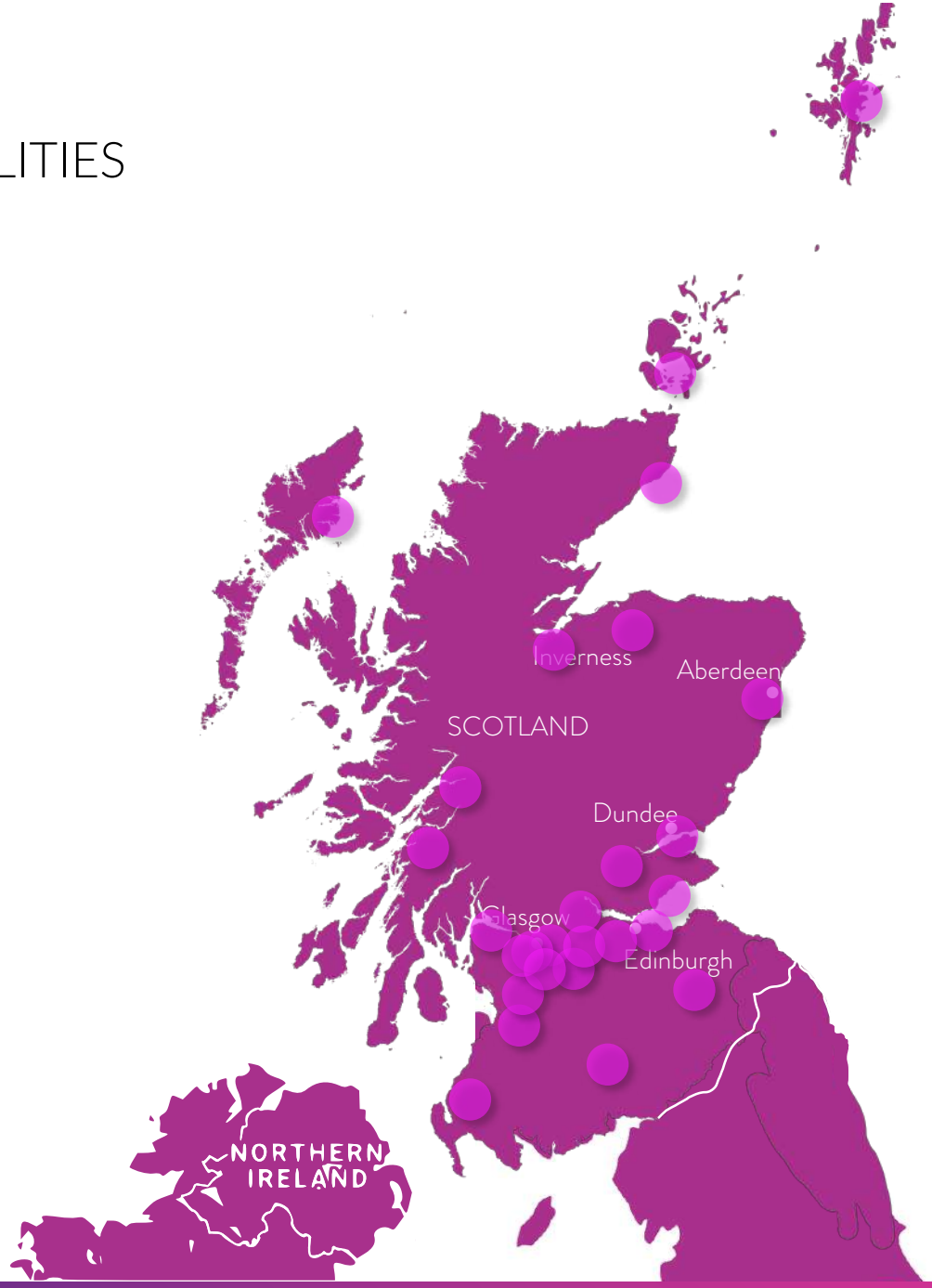
HEAT MAPPING

AI / MAJOR R&D HUBS



HEAT MAPPING

MAJOR MEDICAL FACILITIES

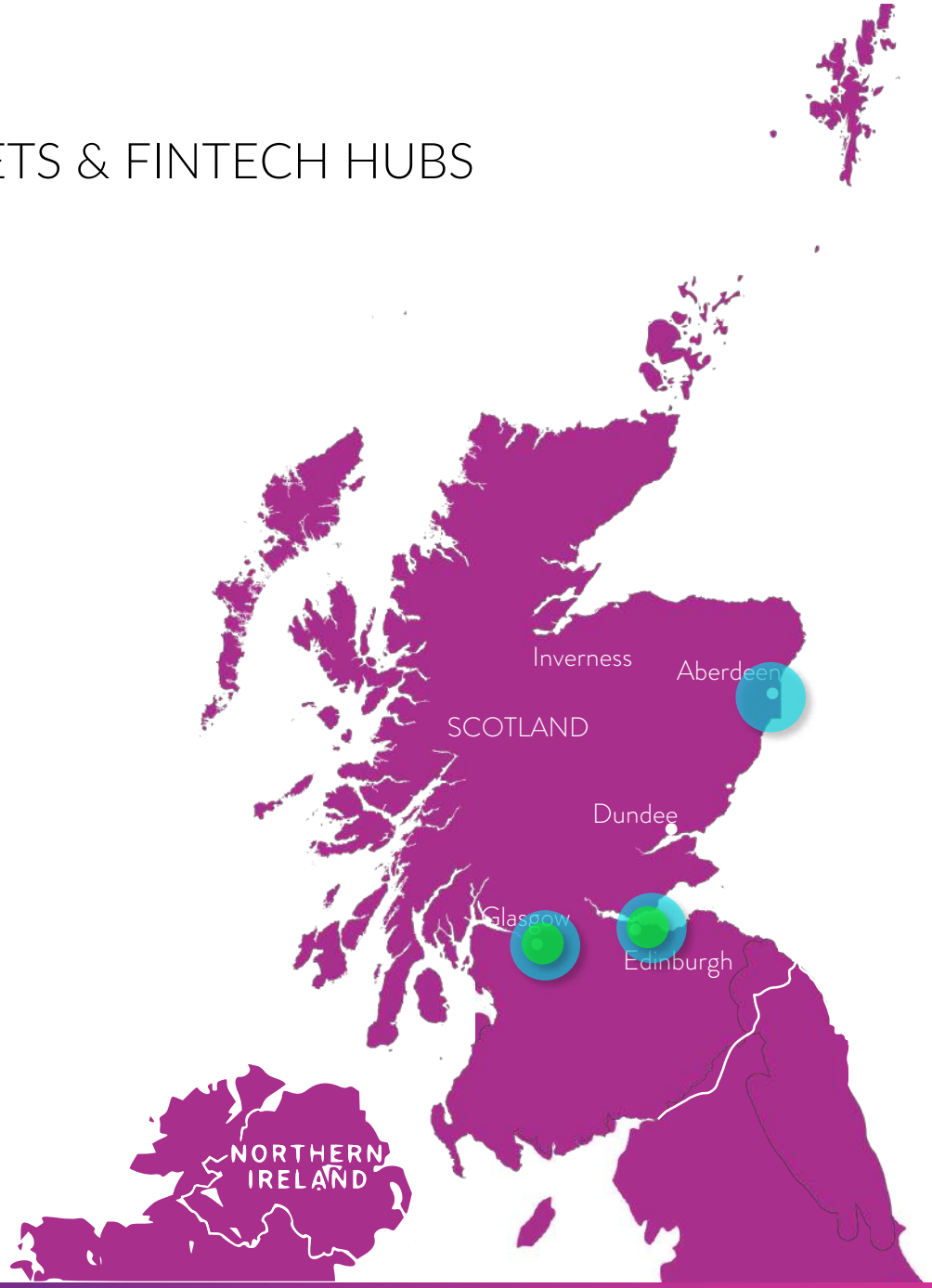


Key:

Hospitals with A&E facilities

HEAT MAPPING

MAJOR OFFICE MARKETS & FINTECH HUBS



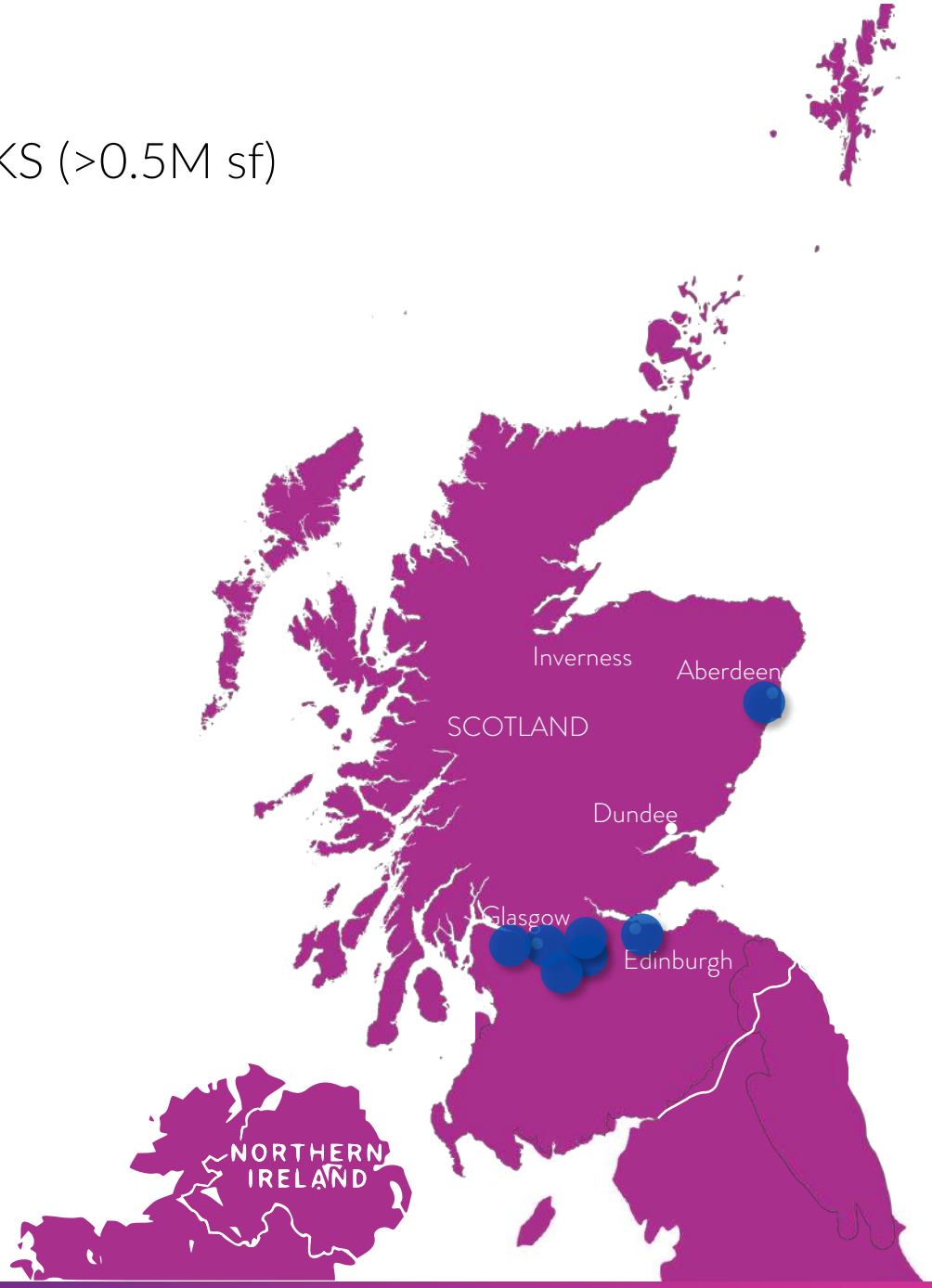
Key:

> 10 Fintech Companies

> 0.5 M sf Grade A Office Supply

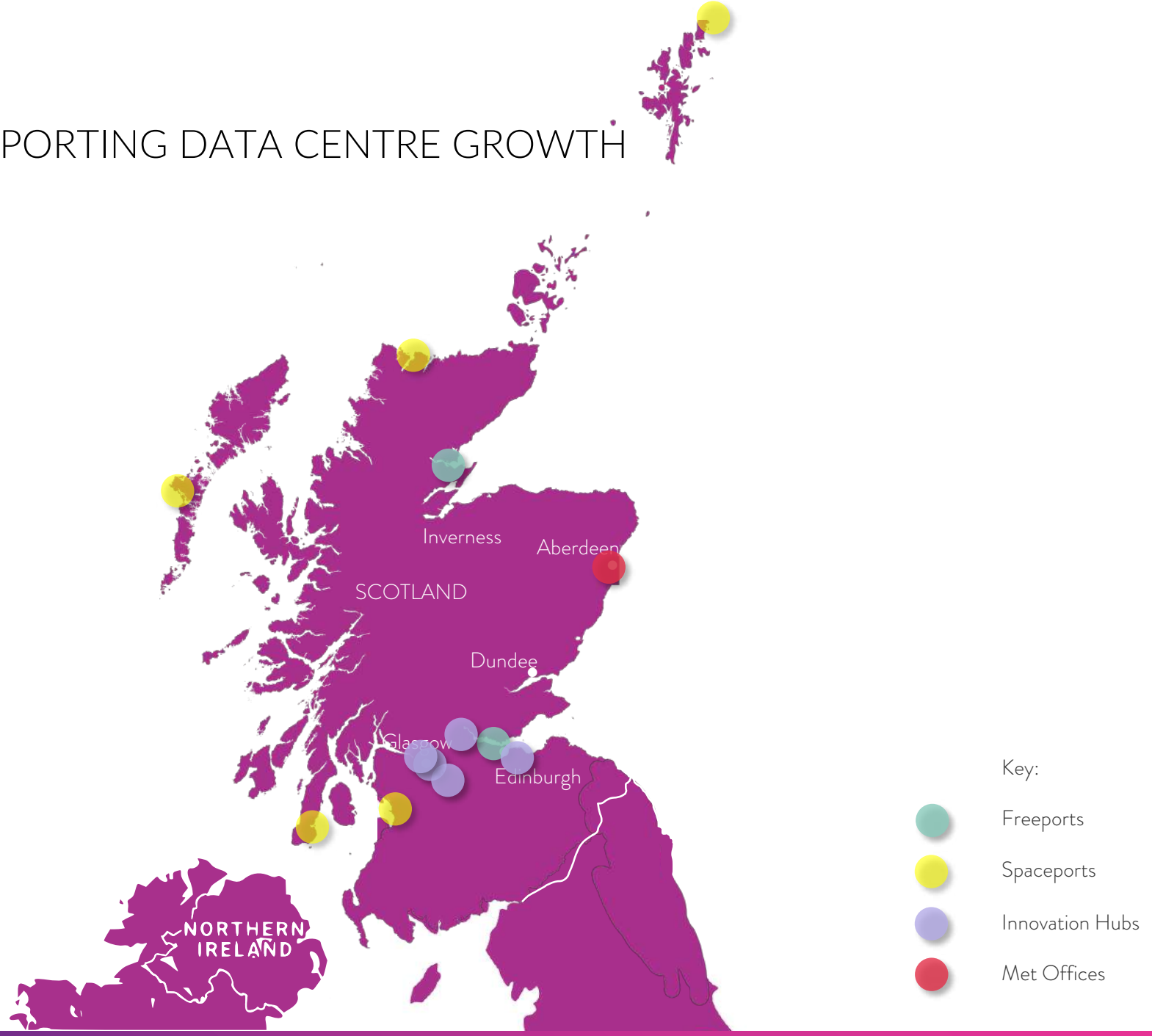
HEAT MAPPING

MAJOR BUSINESS PARKS (>0.5M sf)

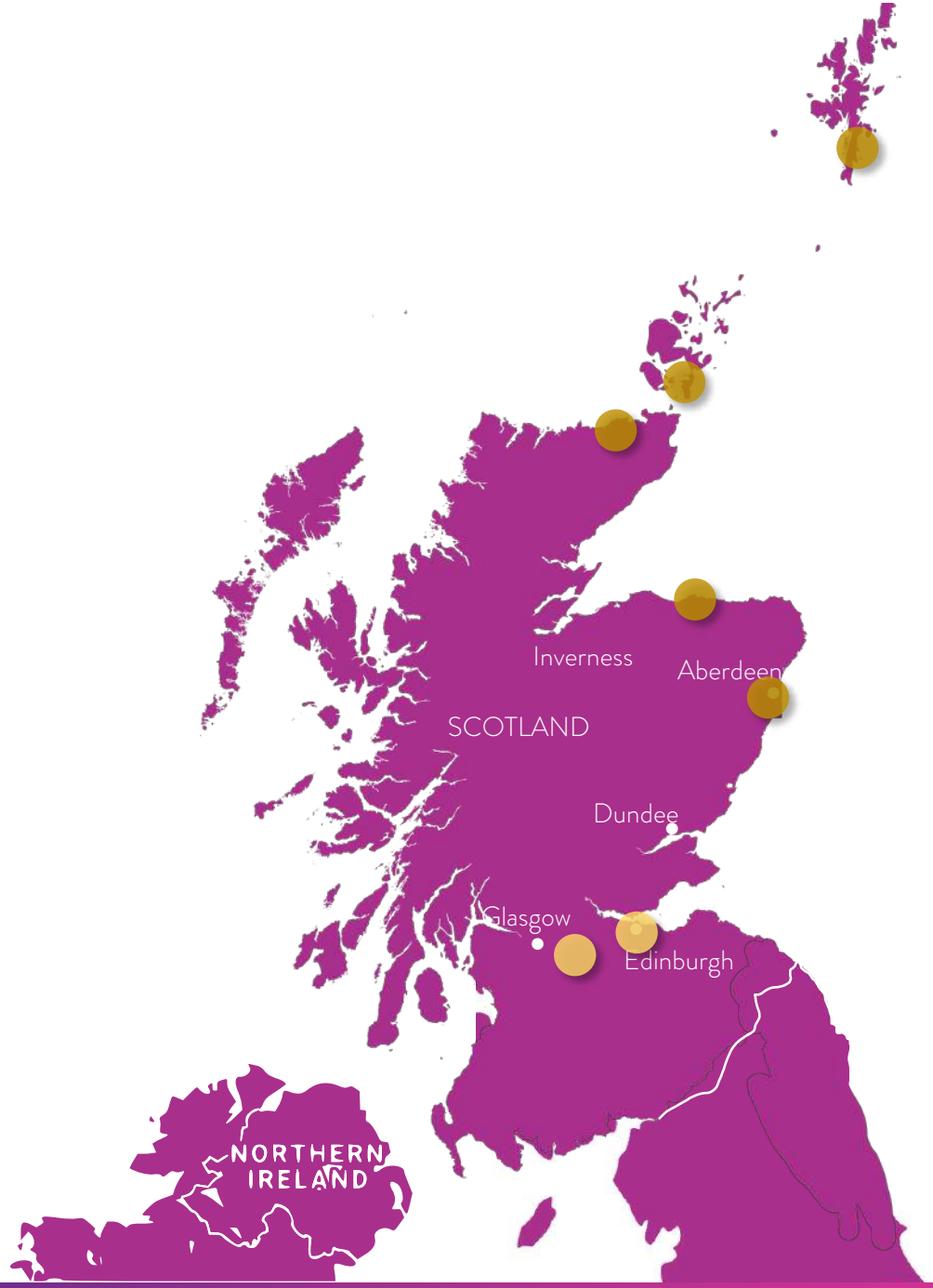


HEAT MAPPING

GOVT INITIATIVES SUPPORTING DATA CENTRE GROWTH



HEAT MAPPING
CONNECTIVITY

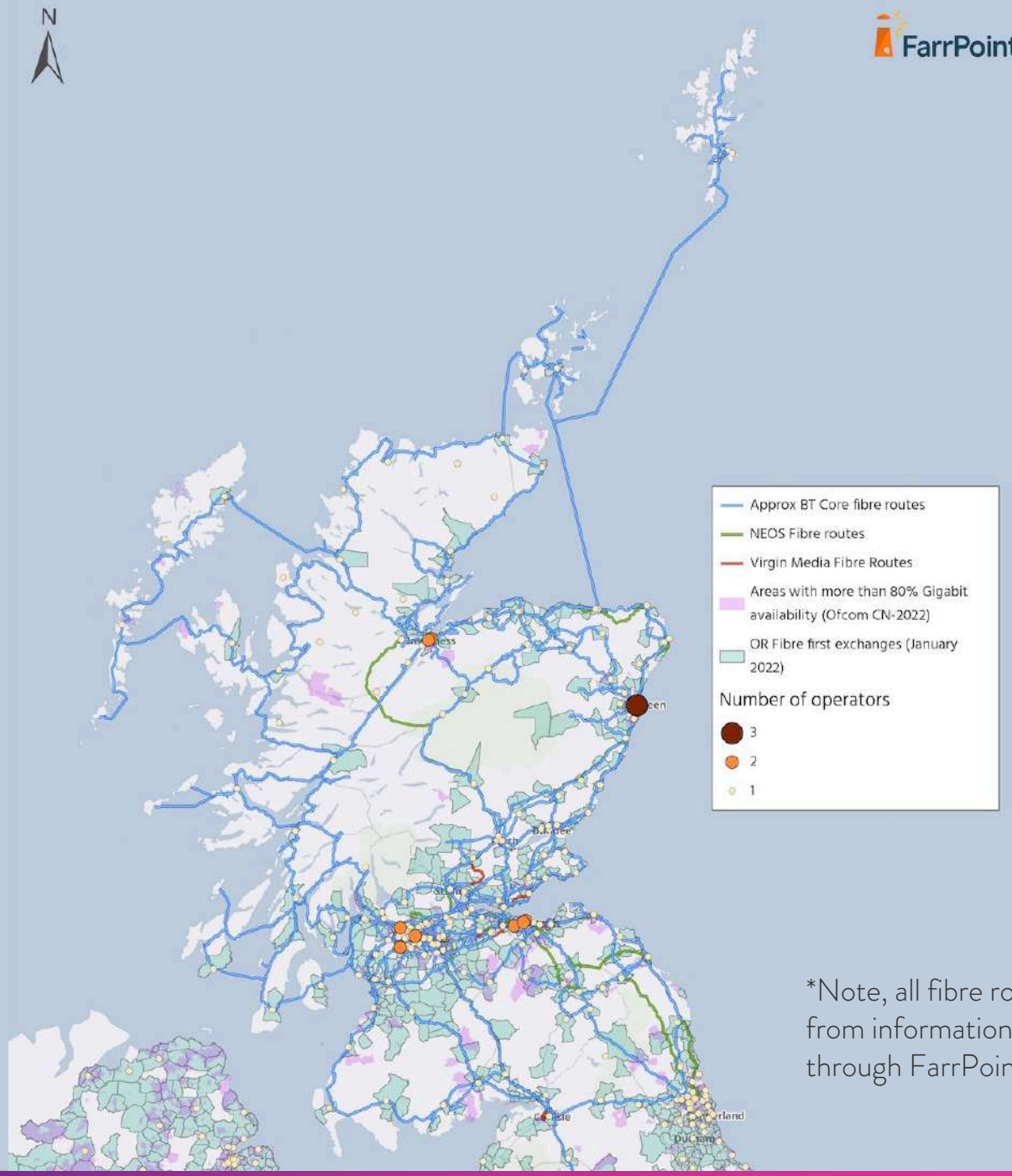


Key:

Cable landing stations connecting to locations outside the UK

Internet Exchange Points

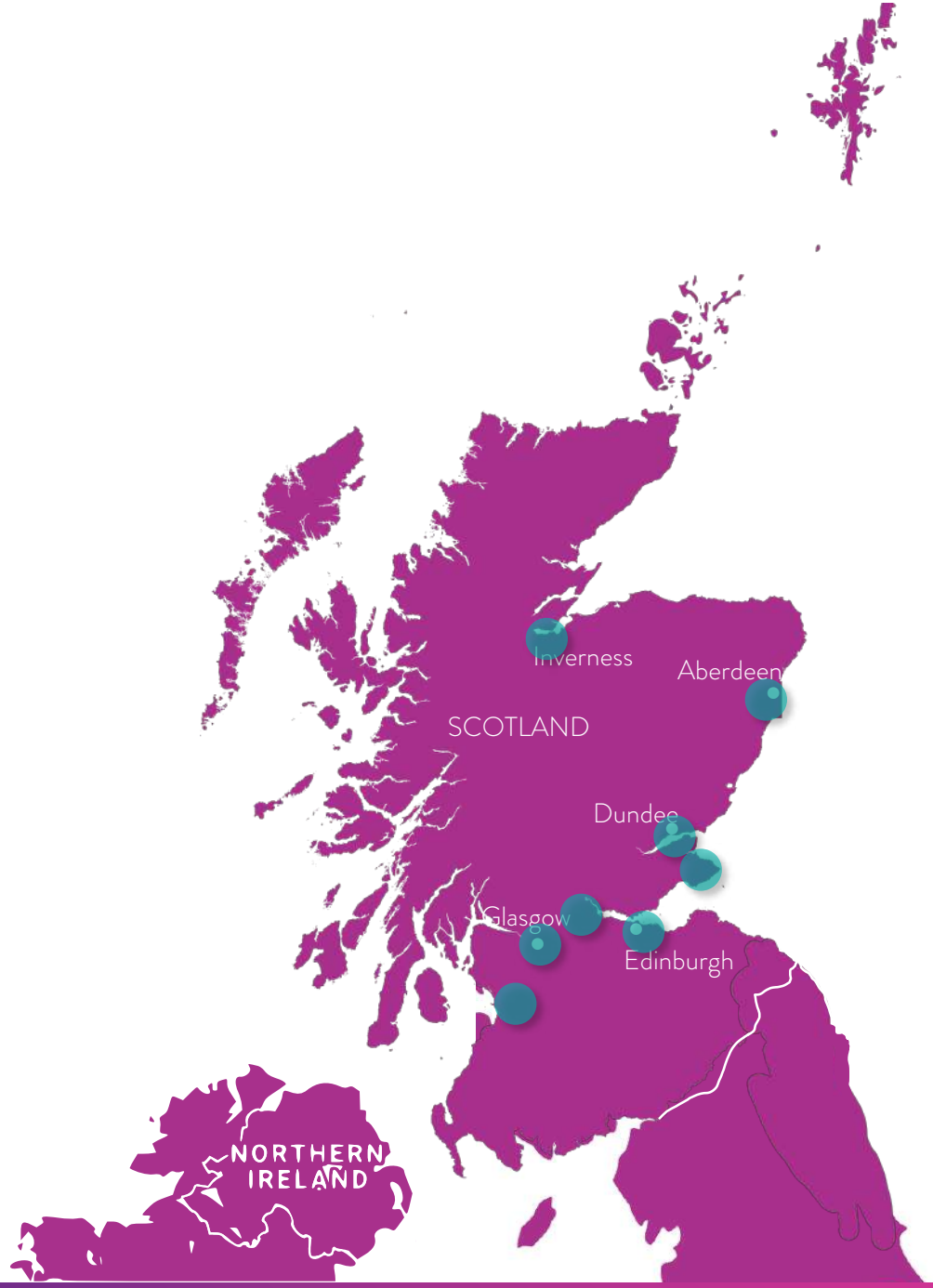
HEAT MAPPING
FIBRE PROVIDERS



*Note, all fibre routes are mapped either from information held in the public domain or through FarrPoint's estimate of core routes

HEAT MAPPING

5G ROLL OUT

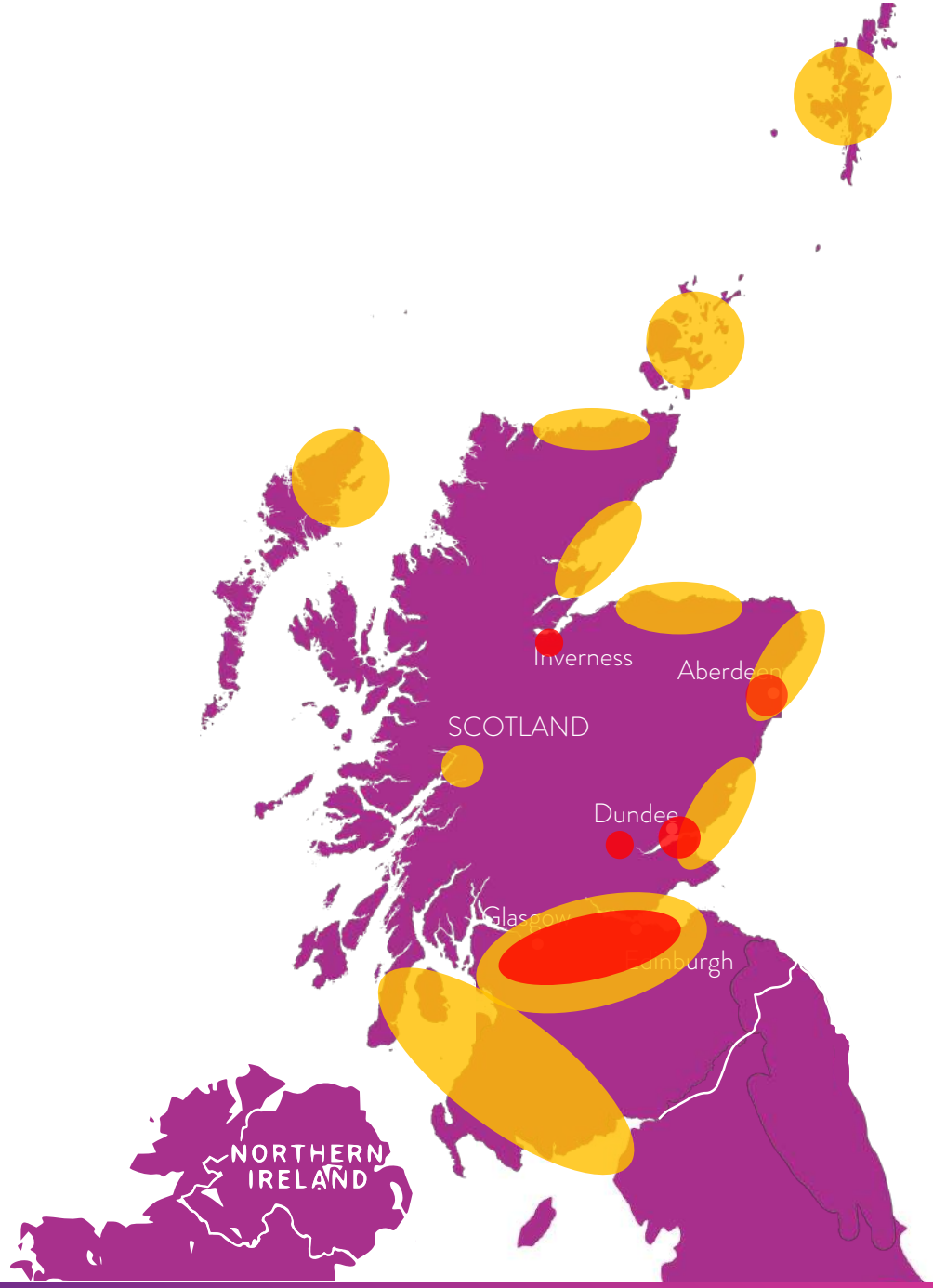


Key:

5G coverage claimed by 1 or more networks (source: www.5G.co.uk)

HEAT MAPPING

TARGET AREAS



Key:

Edge/ Urban Colo Target Areas

Hyperscale Target Areas

DISCLAIMER

- All information, analysis and recommendations made in this report prepared by TechRE are made in good faith and represent TechRE's professional judgement on the basis of information obtained during the course of the assignment. Information presented in the report is considered to be correct at the time of publishing. However, no statement may be deemed in any circumstances to be a representation, undertaking or warranty and Scottish Futures Trust/Host in Scotland, Crown Estate Scotland and Scottish Enterprise cannot accept any liability should such statements prove to be inaccurate or based on incorrect premises.

- In particular, data centre operators and other interested parties need to undertake their own site investigations and risk assessments to satisfy themselves of the suitability or otherwise, of a specific location. All sites contained in this report should be subject to further due diligence to verify conditions and current status.

- In terms of fibre mapping FarrPoint Ltd has produced the information contained herein for Scottish Futures Trust. Fibre routes are deduced from data available in the public domain and are indicative. As above, Scottish Futures Trust/Host in Scotland, Crown Estate Scotland and Scottish Enterprise cannot accept any liability should such information prove to be inaccurate or based on incorrect premises.

- Should interested parties wish to know more about the background of each of the selected sites or undertake further assessments, please do not hesitate to contact Scottish Futures Trust using the contact information provided overleaf.

- The date in this report was collected up until the end of March 2023 and may have changed since the date of publication.

CONTACT INFORMATION

For more information on this document please see below details

Steve Harrison
steve.harrison@scotent.co.uk

c/o Scottish Futures Trust,
Edinburgh, United Kingdom,
EH4 8DA

HOSTINSCOTLAND.COM

Henry Sutton / Christian Wright
henry.sutton@techreconsulting.com
christian.wright@techreconsulting.com

7 Hopetoun Crescent,
Edinburgh, United Kingdom,
EH7 4AY

TECHRECONSULTING.COM

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