



Aberdeen Heat & Power (AH&P)

Ian Booth - General Manager

20th August 2013

**APSE Renewable and Energy Efficiency
Advisory Group**



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Heat & Power

Delivering Affordable Warmth .



Aberdeen Heat & Power (AH&P)in the beginning

- Stems back to the HECA strategy - 1995 Home Energy Conservation Act
 - Investment over many years through Housing Capital Programme - vast majority of low rise homes have gas central heating
 - 1999 - City Council adopted Affordable Warmth Strategy
 - But little done in adopting a strategy for multistorey blocks - regarded as "Hard to Heat"
 - In 2001 Council commissioned options appraisal of all 59 multi-storey blocks (4,500 flats)
 - Had electric storage or warm air heating
 - 70% in fuel poverty
 - Recommended install CHP in clusters of multistorey blocks
- Delivering Affordable Warmth .





Aberdeen Heat & Power (AH&P)in the beginning

- **2002 - Established Aberdeen Heat and Power**
 - Independent - not-for-profit company, to develop and manage CHP schemes "for the benefit of the people of Aberdeen", focusing on multi storey blocks and adjacent Council buildings



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AH&P Mission Statement



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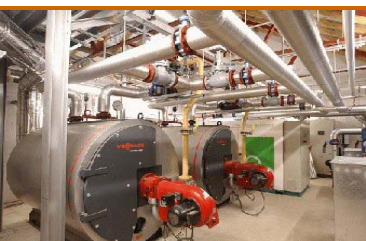
Aberdeen Heat & Power...
aims to deliver reliable, affordable, low
carbon heat

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What we do

- **Installation & maintenance of CHP systems**
- **Various locations - clusters of multis + stand alone systems + public buildings**
- **Income Generation - electricity sales to grid**
- **Tackle fuel poverty - by providing affordable warmth**
- **Affordable Warmth - flat rate charge for consumers**
- **Develop Expertise - training local installers**
- **Sustainability - plan developments to connect more consumers by expanding the CHP energy infrastructure network**



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How we operate.....



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- **Sources of income:**
 - Sale of electricity
 - Sale of heat - domestic and non-domestic
 - Maintenance charge
- **Expenditure:**
 - Fuel
 - Staff
 - Maintenance
 - Costs of running a company

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How we get funded.....

- Whole life costings: Capital costs higher; Running costs lower
- For housing full capital costs need to be covered
- If capital had to be borrowed the heat charge would increase and occupants would be back in fuel poverty
- To date full capital for the housing from combination of:
 - Housing Capital Programme
 - Charge to owners for connections
 - Community Energy Programme Grant (CEP)
 - Carbon Emission Reduction Target (CERT)
 - Carbon Emission Saving Programme (CESP)
 - Energy Company Obligation (ECO)



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Developments to date...



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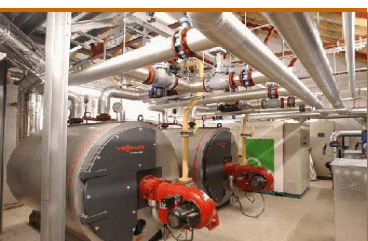
Stockethill & Hazlehead.....

Stockethill

- First project for Aberdeen Heat & Power
- First such project for Aberdeen City Council
- 4 blocks at Stockethill= 286 flats
- Completed 2003/05

Hazlehead

- Plant room located in school
- 4 blocks = 180 flats
- 47 flats in sheltered housing unit
- School with swimming pool
- Hazlehead sports pavilion
- Private electricity supply to school
- Complete 2006/07



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Seaton - Phase 1.....



Phase 1

- Plant room designed with sedum to blend with Beach Links + space for future development
- Incorporates sports changing room and shower facilities
- 6 blocks - c.500 flats complete 2007/08
- Beachfront complex (ballroom, ice rink, leisure centre) complete 2009
- Supply regional sports facility complete 2009



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Stand Alone Systems

Stand-Alone blocks

- Gas fired central boiler plant
- Internals suitable for CHP
- Ashgrove Court - 1 Block of 40 flats completed Dec 2009
- Mastrick Land - 1 block of 52 flats completed March 2010
- Denburn Court - 1 block of 120 flats completed Aug 2010



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Seaton - Phase 2.....

Phase 2

- Additional generating / heat capacity installed
- 8 blocks - c.740 flats complete Aug 2012



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Network Extension to City Centre.....

- £1m grant from Scottish Gov't for DH infrastructure
- Extension of underground network to city centre 2011-13
- Now connecting to public buildings
 - Town House
 - Constitution Court Sheltered Housing
 - Hanover Community Centre
 - Frederick Street Health Village (HubCo)
 - Frederick Street Business Centre



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Results to date.....

Reduced fuel poverty

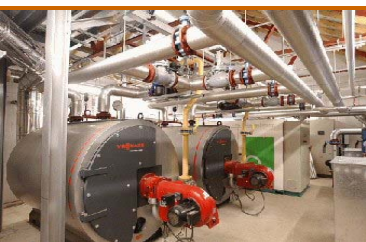
- Through provision of affordable heat typical costs per household have reduced by 25-40%

Reduced carbon emissions

- When compared electric heating - district heating from CHP reduces domestic carbon emissions by as much as 40%
- Reduction in operating costs and carbon emissions from public buildings

Improved standards of housing

- Multis are much warmer
- Reduced turnover
- Reduced damp
- Improvements in health
- Improvements in social conditions
- Much reduced level of complaints

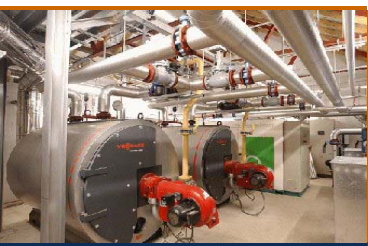


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Current and Planned works.....



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- Aquatics Centre as extension to Aberdeen Sports Village (2014)
- Balnagask cluster as stand alone gas fired plant to supply 150 flats (2013)
- Livingstone Court private sheltered housing block of 40 flats (2013) - Just finished
- Connections to the City Centre Main - 5 public buildings (2013)
- Victoria House - supported housing unit (2014)
- Recently approved projects to install plant and link up 11 multi-storey blocks at Tillydrone and Cairncry areas (by March 2015)

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The Future.....



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- Through development of a subsidiary company non-Council and non-Public Sector connections and identify infrastructure developments
- Extend the DH network at a pace which is financially and practically viable
- Build and sustain partnerships and agreements for future connections
- Review fuel technologies to “bolt on” the front end
- Multiple CHP stations around the City linked into one city-wide heat network



Stockethill



Stockethill

Hazlehead



Stockethill

Seaton

Hazlehead



Stockethill

Seaton

Hazlehead




Seaton

Stockethill

City Centre

Hazlehead

 = Current Projects



Seaton

Stockethill

City Centre

Hazelhead

Torry

 = Current Projects

 = New Projects

Tillydrone

Seaton

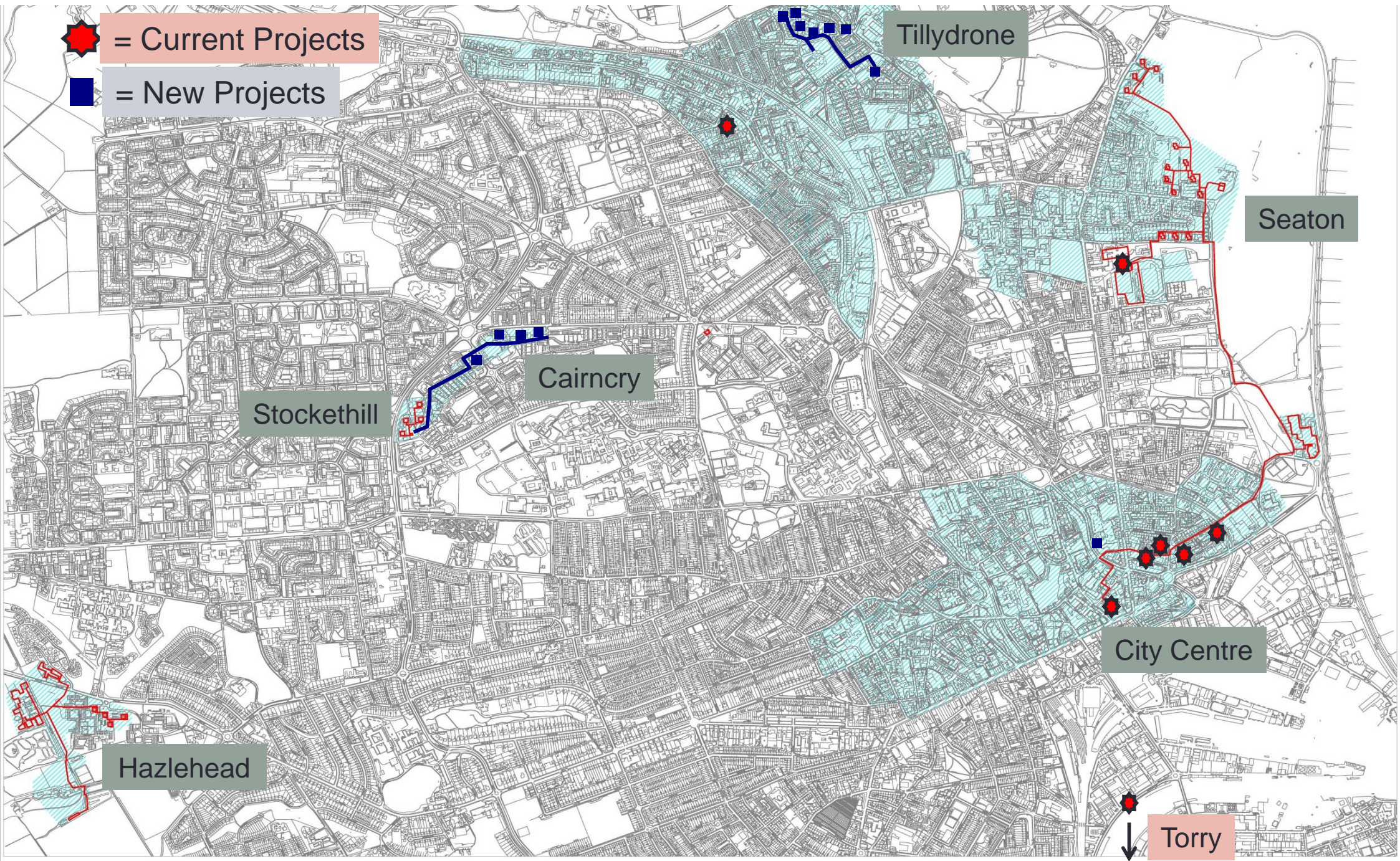
Cairncry


Stockethill

City Centre


Hazlehead

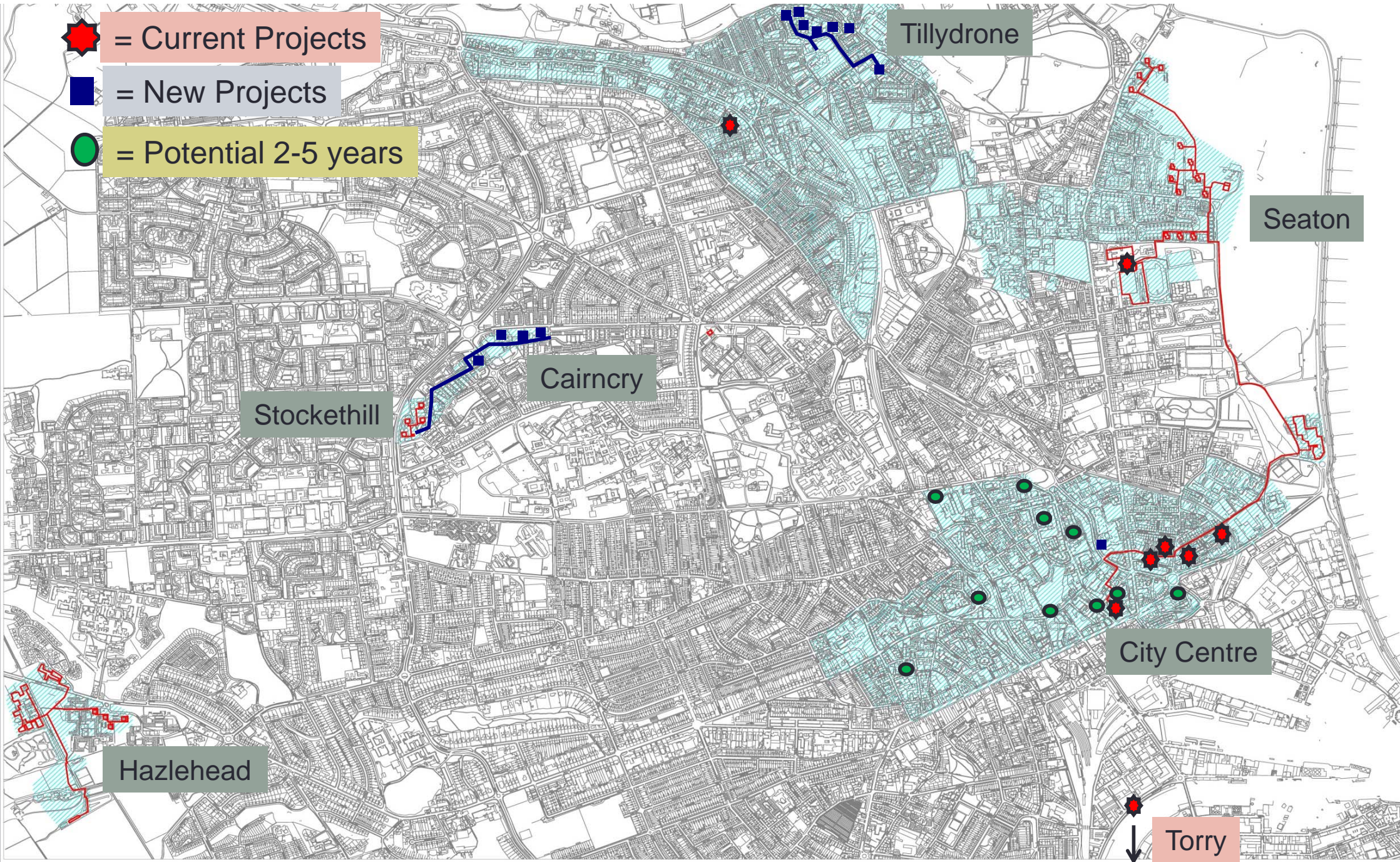
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 = Current Projects

 = New Projects

 = Potential 2-5 years



Tillydrone

Seaton


Cairncry

Stockethill

City Centre

Hazlehead

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 = Current Projects

 = New Projects

 = Potential 2-5 years

 = Long term

 = Energy Centres

Tillydrone

Seaton

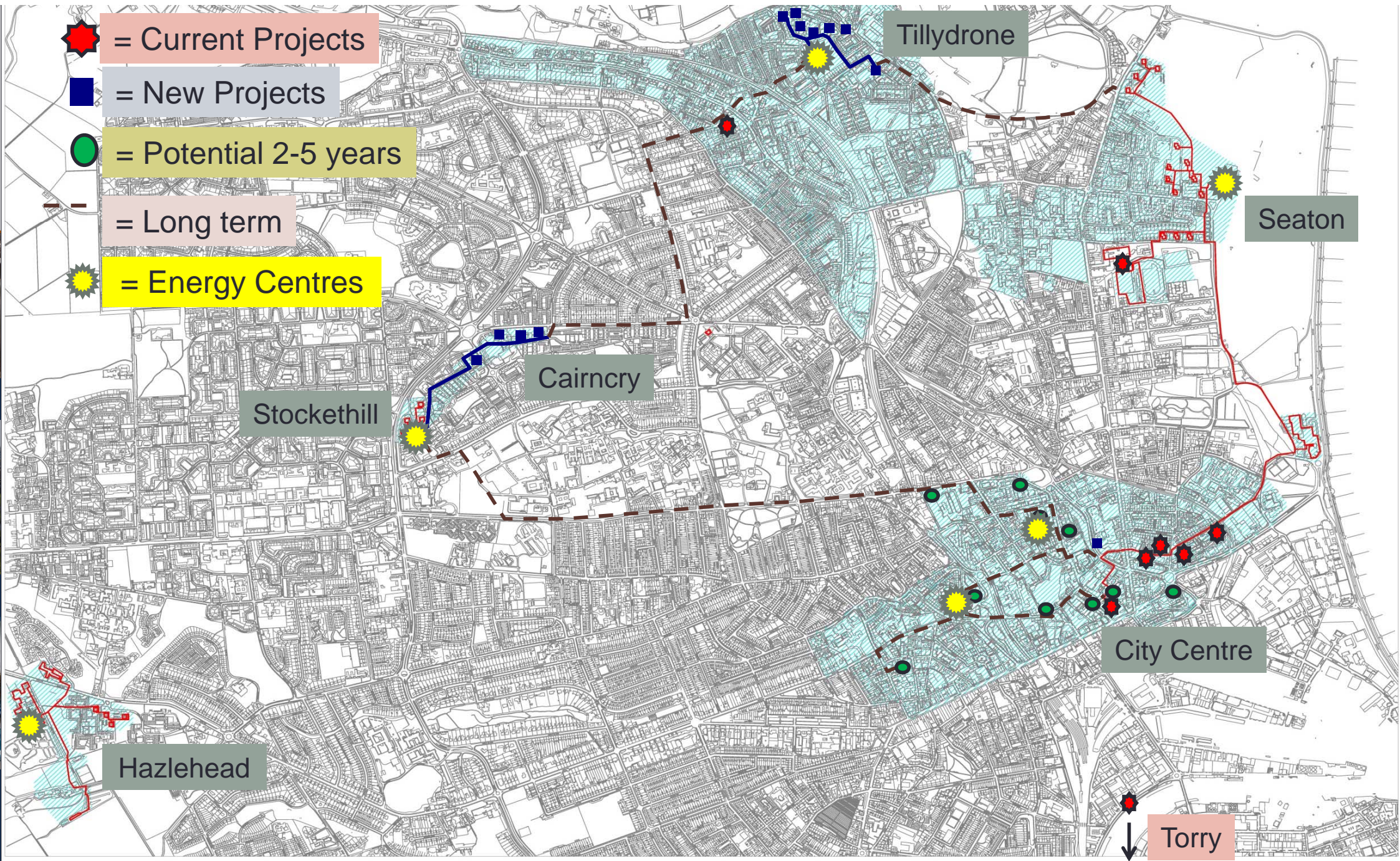
Cairncry

Stockethill

City Centre

Hazlehead

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In conclusion.....

- We believe we are meeting our start-out ambitions
 - Tackling fuel poverty
 - Providing affordable heat
 - Reducing carbon emissions through use of low carbon technology
 - Installing reliable, efficient and controllable systems for domestic and commercial buildings

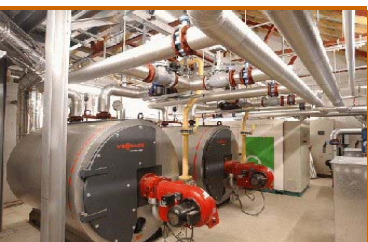


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