

# Public Document Pack



To: Councillor Laing, Convener; Councillor John, Vice Convener; and Councillors Cameron, Duncan, Flynn, Nicoll, Sellar, Wheeler and Yuill.

Town House,  
ABERDEEN, 31 May 2018

## **STRATEGIC COMMISSIONING COMMITTEE**

The Members of the **STRATEGIC COMMISSIONING COMMITTEE** are requested to meet in **Committee Room 2 - Town House** on **THURSDAY, 7 JUNE 2018 at 2.00pm.**

FRASER BELL  
CHIEF OFFICER - GOVERNANCE

### **B U S I N E S S**

#### **DETERMINATION OF URGENT BUSINESS**

1.1 There are no items of urgent business at this time

#### **DETERMINATION OF EXEMPT BUSINESS**

2.1 Members are requested to determine that any exempt business be considered with the press and public excluded

#### **DECLARATIONS OF INTEREST**

3.1 Members are requested to declare any interests

#### **REQUESTS FOR DEPUTATION**

4.1 There are no requests for deputation at this time

## **MINUTE OF PREVIOUS MEETING**

- 5.1 Minute of Previous Meeting of 30 April 2018 (Pages 5 - 14)

## **COMMITTEE PLANNER**

- 6.1 Committee Business Planner (Pages 15 - 20)

## **NOTICES OF MOTION**

- 7.1 There are no Notices of Motion at this time

## **REFERRALS FROM COUNCIL, COMMITTEES AND SUB COMMITTEES**

- 8.1 There are no referrals at this time

## **GENERAL BUSINESS**

- 9.1 Customer and Citizen Engagement (Pages 21 - 30)
- 9.2 Middlefield/Northfield Place-Making (3rd report) (Pages 31 - 40)
- 9.3 Torry Heatnet Pilot Project (Torry Phase 1A) (Pages 41 - 212)
- 9.4 Schoolhill Public Realm Enhancement (Pages 213 - 240)
- 9.5 Joint Initiative for Vehicle Emissions (JIVE) (Pages 241 - 266)
- 9.6 Demolition of Torry Academy and Kincorth Academy (Pages 267 - 298)

## **EXEMPT / CONFIDENTIAL BUSINESS**

- 10.1 Demolition of Torry Academy and Kincorth Academy - exempt appendix in relation to item 9.6 on the agenda (Pages 299 - 324)
- 10.2 CareFirst Contract Extension (Pages 325 - 330)
- 10.3 Extension to Domestic Gas Servicing and Maintenance Contract (Pages 331 - 336)
- 10.4 Occupational Health Provision (Pages 337 - 362)

10.5 'Being Digital' Technology Procurement (to follow)

EHRIA's related to reports on this agenda can be viewed at  
[Equality and Human Rights Impact Assessments](#)

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## STRATEGIC COMMISSIONING COMMITTEE

ABERDEEN, 30 April 2018. Minute of Meeting of the STRATEGIC COMMISSIONING COMMITTEE. Present:- Councillor Laing, Convener; Councillor John, Vice-Convener; and Councillors Cameron, Jackie Dunbar (as a substitute for Councillor Cameron for articles 11 and 12 and as a substitute for Councillor Flynn for article 14) , Duncan, Flynn, Nicoll, Sellar, Wheeler and Yuill.

**The agenda and reports associated with this minute can be found at:-**

**<https://committees.aberdeencity.gov.uk/ieListDocuments.aspx?CId=616&MIId=6237&Ver=4>**

**Please note that if any changes are made to this minute at the point of approval, these will be outlined in the subsequent minute and this document will not be retrospectively altered.**

### DETERMINATION OF EXEMPT BUSINESS

1. The Convener proposed that the Committee consider items 10.1 (Roads and Transport Related Budget Programme 2018-2019 – Exempt Appendix) and 10.2 (Shaping Aberdeen Housing LLP) with the press and public excluded.

#### **The Committee resolved:-**

in terms of Section 50(A)(4) of the Local Government (Scotland) Act 1973, to exclude the press and public from the meeting during consideration of items 10.1 and 10.2 so as to avoid disclosure of exempt information of the classes described in paragraph 8 (article 12) and paragraphs 6 and 9 (article 14) of Schedule 7(A) of the Act.

### DECLARATIONS OF INTERESTS

2. Members were requested to intimate any declarations of interest in respect of the items on today's agenda, thereafter, the following declaration of interest was intimated at this stage in the meeting:-

- (i) Councillor Flynn declared an interest in item 10.2 (Shaping Aberdeen Housing LLP) by virtue of being a Council appointed Board member of Shaping Aberdeen Housing LLP. Councillor Flynn considered that the nature of his interest required him to leave the meeting and he took no part in the consideration of this item.

### COMMITTEE BUSINESS PLANNER

3. The Committee had before it the committee business planner as prepared by the Chief Officer – Governance. Members asked a number of questions in respect of items on the planner.

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### **The Committee resolved:-**

- (i) to note that the following items (Review of Sports Organisations – Long Term Future Viability) and (Review of Sports Organisations –Sport Aberdeen Contract) had been delayed to enable the new Commissioning Directorate to review the options and would now be submitted to the Committee on 7 June 2018;
- (ii) to note that the item on the submission of a Participatory Budgeting Policy had been delayed to the Committee’s meeting on 13 September 2018; and
- (iii) to otherwise note the content of the business planner.

### **SHAPING ABERDEEN HOUSING LLP – REFERRALS FROM COMMITTEES/SUB COMMITTEES**

4. The Committee noted that the exempt Shaping Aberdeen Housing LLP report which had referred by City Growth and Resources Committee of 24 April 2018 was to be considered at item 10.2 on today’s agenda (article 14 of this minute refers).

### **INTRODUCTION TO THE COMMISSIONING APPROACH**

5. The Committee had before it a report by the Director of Commissioning which provided an overview of commissioning and outlined the benefits which would be achieved by the introduction of a / the? commissioning approach as described in the new target operating model of the Council.

### **The report recommended:-**

that the Committee –

- (a) instruct the Director of Commissioning to complete a population needs assessment and to agree that as part of its development that this be raised at the Community Planning Partnership (CPP) so as to encourage partners to engage and to build upon previous needs assessments;
- (b) note that the Committee would receive reports on key aspects reflecting the development of the commissioning approach as reflected in the committee business planner and Terms of Reference; and
- (c) instruct the Director of Commissioning to undertake discussions with other Public Sector partners to see if there were opportunities for more joint or integrated options to be developed as a means of improving outcomes and value for money.

The Convener, seconded by the Vice Convener moved:-

That the Committee approve the recommendations contained within the report.

Councillor Flynn, seconded by Councillor Cameron, moved as an amendment:-

That the Committee agree that as the Commissioning model was developed moving forward, there would be no attempt to outsource further council services.

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On a division, there voted:- for the motion (6) – the Convener, the Vice Convener and Councillors Duncan, Sellar, Wheeler and Yuill; for the amendment (3) – Councillors Cameron, Flynn and Nicoll.

**The Committee resolved:-**

to adopt the motion.

### CITY PLAY AREAS

6. The Committee had before it a report by the Chief Operating Officer which (1) advised on the progress of the 2017/18 Environmental Services programme of Play Area Refurbishment Works; and (2) requested authority to spend up to £470,000 to deliver the 2018/19 Play Area Refurbishment Works.

**The report recommended:-**

that the Committee –

- (a) acknowledge the success of the 2017/18 refurbishment programme; and
- (b) agree that Environmental Services should continue the rolling programme of play area refurbishment and to approve the total estimated expenditure of £470,000 for this programme in 2018/2019. This being subject to the service having the capacity to deliver and subject to the industry suppliers having the capacity to supply within the 2018/19 financial year.

**The Committee resolved:-**

to approve the recommendations.

### BUS LANE ENFORCEMENT USE OF NET SURPLUS - PROPOSED PROGRAMME 2018/19

7. The Committee had before it a report by the interim Chief Officer – Strategic Place Planning which provided an update on the status of the 2017/18 Bus Lane Enforcement (BLE) programme and sought approval for a new programme of projects to be delivered from 2018/19, using the net surplus from the BLE system.

**The report recommended:-**

that the Committee –

- (a) note the progress on the projects funded from the BLE programme up to 2017/18, as detailed in Appendix 1;
- (b) approve the proposed expenditure detailed in relation to the Proposed Bus Lane Enforcement Programme Projects 2018/19, as detailed in Appendix 2;
- (c) approve the implementation of the Proposed Bus Lane Enforcement Programme of Projects 2018/19, including the instruction of procurement procedures therefore, as appropriate and as funding becomes available; and

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- (d) delegate authority to the Chief Officer for Strategic Place Planning to carry out those procurements.

**The Committee resolved:-**

to approve the recommendations.

### FUNDED COMMUNITY PROJECTS

8. The Committee had before it a report by the Chief Operating Officer which sought approval to provide grant funding and enter into grant funding agreements in relation to the community projects. Funding had been allocated within the Council's general fund budget 2018-19.

**The report recommended:-**

that the Committee –

- (a) approve the provision of grant funding for community projects for 2018-19 as set out in the financial implications section (4.1) of the report;
- (b) agree that a grant funding agreement should be made with each of the projects confirming funding for 2018-19; and
- (c) delegate authority to the Head of Commercial and Procurement Services in consultation with the Chief Officer - Finance to approve the terms and conditions of the grant funding agreements.

**The Committee resolved:-**

to approve the recommendations.

### EXTERNAL FUNDING FOR TRANSPORT PROJECTS 2018/19

9. The Committee had before it (1) a report by the interim Chief Officer – Strategic Place Planning which advised of a number of external funding opportunities that had become available or would soon become available to the Council for transportation projects and, where these were successful, sought approval to accept and spend the funds obtained; and (2) an addendum to the report which advised of updates regarding the funding allocations to the Bridge of Dee Programme and the bus stop improvement budget following the NESTRANS Board meeting on 18 April 2018.

**The report recommended:**

that the Committee

- (a) note that Aberdeen City Council:-
  - (a) had been awarded funding from Paths for All to deliver projects outlined in the Smarter Choices, Smarter Places 2018/19 Programme (See Appendix 1);



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- (b) had been awarded funding from NESTRANS Revenue Programme 2018/19 to deliver projects outlined in the report (See Appendix 2A);
  - (c) was bidding to the NESTRANS Capital 2018/19 funds to deliver projects outlined in the report (See Appendix 2B);
  - (d) was bidding to the SUSTRANS Community Links 2018/19 fund to deliver projects outlined in the report (See Appendix 2C); and
  - (e) intended to use staff time, Civitas Portis works, existing Developer Contributions and Aberdeen Western Peripheral Route Non-Motorised User (AWPR) (NMU) Offset Mitigation funding as part of the match funding mechanism (See Appendix 3);
- (b) approve the estimated expenditure and procurement exercises in respect of each of the projects detailed in the appendices to the report for any contract with estimated expenditure of £250,000 and above (Works) and £50,000 and above (Goods or Services); and
- (c) note that permission to authorise the Developer Contributions and the AWPR NMU offset mitigation funds to be used as Match Funds and spent in accordance with the relevant legal agreement, had been reported to the City Growth and Resources Committee at its meeting on 24 April 2018.

The addendum to the report advised of two changes to the list of bids, following the NESTRANS Board meeting namely:-

- The allocation for the Bridge of Dee, in Appendix 2A of the report, had reduced from £100,000 to £10,000. This was to reflect the delays to the Western Peripheral Route opening; and
- The Bus Stop improvements budget, in Appendix 2B of the report, had increased from £100,000 to £165,000 on the Capital Funded Schemes list. The extra funding had been brought forward from the reserve list, Appendix 2C of the report, which originally showed an additional £100,000 for Bus Stop Improvements. The reserve list fund for this had now been reduced to £35,000 to reflect this.

**The Committee resolved:-**

to approve the recommendations noting the revised figure in Appendices 2A and 2B as detailed in the addendum to the report.

### PROPOSED PROCUREMENT OF COUNCIL HOUSING DEVELOPMENT PARTNERS

10. The Committee had before it a report by the Director of Resources which presented an opportunity for the Committee to consider alternative mechanisms to deliver Council Housing and sought approval to invite proposals from landowners in Aberdeen for the construction of Council housing on their land.

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**The report recommended:**

that the Committee

- (a) agree to the strategic commissioning principle that the Housing Revenue Account (HRA) could exercise the right to purchase completed units from land owner/developers or enter into other agreements where such units could be delivered on commercially viable rates at best value and in accordance with an approved specification, financial model, procurement/legal model, business plan and to meet a recognised need; and
- (b) authorise the Chief Officer Corporate Landlord working with the Head of Commercial and Procurement Services to undertake market engagement with landowners in Aberdeen in relation to proposals for the construction of Council housing on their land in an open, transparent, non-selective and non-discriminatory manner.

**The Committee resolved:**

to approve the recommendations.

### DECLARATION OF INTEREST

**During consideration of the following item of business Councillor Cameron declared an interest business by virtue of his home address. Councillor Cameron considered that the nature of his interest required him to leave the meeting and he took no part in the Committee's deliberations thereon on this item or in respect of item 9.7 (Roads and Transport Related Budget Programme 2018-2019) on the agenda (article 12 refers). Councillor Dunbar substituted for Councillor Cameron for these items of business only.**

### ROADS AND TRANSPORT RELATED BUDGET PROGRAMME 2018-2019

**11.** The Committee had before it a report by the Chief Operating Officer? which (1) presented the proposed roads and transportation programme from the approved Capital budgets for 2017/18; and (2) sought approval for the specific schemes where detailed and the budget heading for the remainder.

**The report recommended:-**

That the Committee -

- (a) approve the schemes listed in the Appendices as the detailed proposals for expenditure within budget heading;
- (b) instruct the Chief Officer of Operations and Protective Services to implement the detailed programme;
- (c) delegate authority to the Chief Officer of Operations and Protective Services, to undertake or instruct appropriate procedures in accordance with the Council's

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Procurement Regulations to procure the works referred to in the exempt Appendices for the Roads Capital Budget programme for the financial year 2018/19 and award contracts relating thereto;

- (d) delegate authority to the Chief Officer of Operations and Protective Services in consultation with the Head of Commercial and Procurement Services to award contracts on receipt of a valid tender submission subject to necessary funding in the approved revenue and capital budgets; and
- (e) approve as estimated expenditure in terms of the Procurement Regulation 4.1.1, in order for work to commence on the capital programme, the sums shown against each heading of the Roads Capital Budget for the financial year 2018/19 set out in Exempt Appendices to the report.

The Roads Manager advised that at appendix M the figure for carriageway resurfacing programme should be £2,788,00 rather than £2,758,000 and the figure for drainage programme should be £120,000 rather than the £127,000 detailed in the report.

### **The Committee resolved:-**

- (i) to note the updated figures advised verbally;
- (ii) to approve the schemes listed in the Appendices as the detailed proposals for expenditure within budget heading under exception of last two items in Appendix G;
- (iii) to approve spending of £500,000 the year of the £10m additional investment in roads approved within the Administration's budget on 6 March to be spent on Repairs to Junctions, poor Utility Tracks and areas of recurring pothole repairs;
- (iv) to instruct the Chief Officer of Operations and Protective Services to implement the detailed programme;
- (v) to delegate authority to the Chief Officer of Operations and Protective Services, to undertake or instruct appropriate procedures in accordance with the Council's Procurement Regulations to procure the works referred to in the exempt Appendices for the Roads Capital Budget programme for the financial year 2018/19 and award contracts relating thereto;
- (vi) to delegate authority to the Chief Officer of Operations and Protective Services in consultation with the Head of Commercial and Procurement Services to award contracts on receipt of a valid tender submission subject to necessary funding in the approved revenue and capital budgets;
- (vii) to approve as estimated expenditure in terms of the Procurement Regulation 4.1.1, in order for work to commence on the capital programme, the sums shown against each heading of the Roads Capital Budget for the financial year 2018/19 set out in Exempt Appendices to this report; and
- (viii) to instruct the Chief Officer of Operations and Protective Services to confirm as part of the budget process for 2019/2020 officer recommendations for the allocation of the £2.5m for 19/20 from the additional £10m investment in roads approved on 6 March 2018.

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**In accordance with the decision recorded under article 1 of this minute, the following items of business were considered with the press and public excluded.**

**ROADS AND TRANSPORT RELATED BUDGET PROGRAMME 2018-2019 - EXEMPT APPENDIX**

**12.** With reference to article 11 of this minute, the Committee had before it the full version of the report by the Chief Operating Officer? which contained exempt information.

**The Committee resolved:-**

to note the information contained in the exempt appendices in relation to item 9.7 (Roads and Transport Related Budget Programme 2018-2019) on the agenda (article 11 of this minute refers).

**VALEDICTORY**

**13.** The Convener advised that this was Mr Cheyne, Roads Manager, last committee meeting and last day of employment before retiring from the Council after 24 years of service. She expressed her sincere thanks for his professionalism, diligence and determination to deliver services for the citizens of Aberdeen in all of the roles which he undertook throughout his employment.

**The Committee resolved:-**

to concur with the remarks of the Convener.

**DECLARATION OF INTEREST**

**In accordance with article 2 of this minute, Councillor Flynn left the meeting prior to consideration of the following item of business. Councillor Dunbar substituted for Councillor Flynn for this item of business only.**

**SHAPING ABERDEEN HOUSING LLP - REFERRED BY CITY GROWTH AND RESOURCES COMMITTEE OF 24 APRIL 2018**

**14.** With reference to article 16 of the minute of the meeting of the City Growth and Resources Committee of 24 April 2018, the Committee had before it by way of referral a minute extract and report from the City Growth and Resources Committee of 24 April 2018, which provided details in relation to the Council's involvement with the Housing LLP and addressed an earlier action opportunity for new build Council housing.

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The City Growth and Resources Committee had resolved, amongst other things to refer the report to the Strategic Commissioning Committee on 30 April 2018 for approval of the following recommendations subject to approval to proceed with the Summerhill site as outlined within the report at section 2.8 by the Capital Programme Committee on 23 May 2018:-

- (1) agree to tender for the development and construction works for the Summerhill project by making use of either a suitable existing OJEU compliant framework e.g. Procurement Hub (part of Places for People Group) Development Contractors framework or via the undertaking of an alternative fully compliant procurement process and approves the total estimated expenditure as detailed in the report; and
- (2) delegate authority to the Director of Resources, following consultation with the Head of Commercial and Procurement Services and the Chief Officer – Governance, to undertake the tender process and award the necessary contracts on behalf of the Council for the Summerhill project.

**The Committee resolved:-**

to approve the recommendations as referred from the City Growth and Resources Committee.

- **COUNCILLOR LAING, Convener**

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	A	B	C	D	E	F	G	H	I
1	<b>STRATEGIC COMMISSIONING BUSINESS PLANNER</b> The Business Planner details the reports which have been instructed by the Committee as well as reports which the Functions expect to be submitting for the calendar year.								
2	Report Title	Minute Reference/Committee Decision or Purpose of Report	Update	Report Author	Chief Officer	Directorate	Terms of Reference	If delayed, removed, transferred or withdrawn, enter either D, R, T or W	Explanation if delayed, removed, transferred or withdrawn
3			7 June 2018						
4	Procurement workplans	To present the procurement workplans detailing all contracts expected to be procured per Function in the next year.		Craig Innes	Commercial and Procurement	Commissioning	Purpose 3	D	Commercial and Procurement are working with each Function to finalise the respective workplans and each will be reported to the next meeting of the Committee.
5	Development of Models for Civic Leadership and Engagement	To consider models for Civic Leadership and Engagement		Derek McGowan	Early Intervention and Community Empowerment	Customer		R	Following the decision at Full Council on 5 March to 'endorse the values and principles of civic leadership and engagement as set out in Appendix L' there was not a further requirement to report to Committee. This has therefore been removed from the planner. Any future proposals regarding civic leadership and engagement will be presented to the appropriate committee for consideration.
6	Construction Charter	To seek approval of the proposed construction charter.		Stuart Calderwood	Commercial and Procurement	Commissioning	3.4	R	The charter has been approved and signed as per the Council decision on 22 February 2017 therefore a report is not required.

	A	B	C	D	E	F	G	H	I
2	Report Title	Minute Reference/Committee Decision or Purpose of Report	Update	Report Author	Chief Officer	Directorate	Terms of Reference	If delayed, removed, transferred or withdrawn, enter either D, R, T or W	Explanation if delayed, removed, transferred or withdrawn
7	ESCo	To present the Energy Services Company (ESCo) Business Plan for managing the councils energy and energy projects, to achieve the objectives and deliver on the instructions from the Business Case presented to Council 17 <sup>th</sup> August 2016.		Mike Smith	Commercial and Procurement	Commissioning	Purpose 3	D	There are several queries from ESCo Officer/Member Working Group that need to be addressed in order to make the proposed plan robust and these will be responded to in full late May at the next Officer/Member Working Group meeting. APSE Energy are providing support to reshape the Business Model and Plan. The revised workscope is due to be complete early June thereafter and reported to Committee in September 2018.
8	Extension to Domestic Gas Servicing and Maintenance Contract	To seek approval to extend the existing contract.	<b>A report is on the agenda.</b>	Craig Innes	Commercial and Procurement	Commissioning	Purpose 1 and remit 3.4		
9	Review of Sports Organisations - Long Term Future Viability and Sport Aberdeen Contract	Finance, Policy and Resources Committee 6/12/17- The Committee agreed to request that the Head of Finance report back to the next meeting of the Committee setting out the options regarding the long term future viability of an organisation identified in the exempt report.	At its meeting on 30 April 2018, the Committee noted that these actions had been delayed to enable the new Commissioning Directorate to review the options and would now be submitted to the Committee on 7 June 2018.	Craig Innes	Commercial and Procurement	Commissioning	Purpose 7	R	Both aspects will be reported alongside the report on the best way forward for Sport in Aberdeen to be submitted to the Committee in September 2018 as per the Council decision on 6/3/18.
10		Finance, Policy and Resources Committee 6/12/17- The Committee agreed to instruct the Head of Policy, Performance and Resources and Head of Commercial and Procurement Services to report back to the next meeting of the Committee with appropriate recommendations on adjusting and extending Sport Aberdeen's legal contract with a view to refocusing the partnership under a new 'Commissioning Framework Agreement'.							
11	Customer Experience	To present the experience of service users and citizens for consideration.	<b>A report is on the agenda.</b>	Martin Murchie	Commissioning	Commissioning	Remits 1.4, 1, 2, 3, 4		



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	Report Title	Minute Reference/Committee Decision or Purpose of Report	Update	Report Author	Chief Officer	Directorate	Terms of Reference	If delayed, removed, transferred or withdrawn, enter either D, R, T or W	Explanation if delayed, removed, transferred or withdrawn
2	Schoolhill Public Realm Enhancement	To approve the proposed estimated expenditure and procurement.	Report to be considered by Capital Programme Committee on 23 May with recommendation that it be referred to this Committee for consideration of approval of the proposed estimated expenditure and procurement.	Scott Davidson	Corporate Landlord	Resources	Purpose 2 and remit 3.4		
12									
13	Torry Heatnet Pilot Project (Torry Phase 1A)	The Special Council Meeting of 24th October 2016 approved the development of this pilot project, subject the development and approval of a Full Business Case. Report seeks approval of the procurement process.	<b>A report is on the agenda.</b>	Bill Watson	Capital	Resources	Remit 3.4		
14	Middlefield/Northfield Place-Making (3rd report)	To seek approval from Committee for the implementation of the procurement process for the next steps of this Place Making project.	<b>A report is on the agenda.</b>	Bill Watson	Capital	Resources	Remit 3.2, 3.4		
15	CareFirst Contract Extension	To approve the extension of the existing maintenance and support agreement.	<b>A report is on the agenda.</b>	Anne Donaldson	Integrated Children and Family Services	Operations	Remit 3.4		
16	Demolition of Torry Academy and Kincorth Academy	To approve the proposed estimated expenditure and procurement.	<b>A report is on the agenda.</b>	Alastair Reid	Corporate Landlord	Resources	Remit 3.4		
17	Joint Initiative for Vehicle Emissions (Jive 2) Report	To provide an update on the Joint Initiative for Vehicle Emissions (JIVE) and seeks approval to procure vehicles and hydrogen supply to deliver the project.	<b>A report is on the agenda.</b>	Andrew Win	City Growth	Place	Remit 3.1, 3.2, 3.4		
18	Occupational Health Contract	Finance, Policy and Resources Committee 6/12/17- The Committee agreed to delegate authority to the Interim Head of Human Resources following consultation with the Head of Commercial and Procurement Services, to undertake a tender process for the procurement of a contract for the provision of occupational health services for an initial duration of 3 years, with the option to extend for a further period up to 24 months; and to report back a future meeting of this committee with appropriate recommendations.	<b>A report is on the agenda.</b>	Mary Agnew	Governance	Governance	Remit 3.1 and 3.4		
19			<b>13 September 2018</b>						

	A	B	C	D	E	F	G	H	I
	Report Title	Minute Reference/Committee Decision or Purpose of Report	Update	Report Author	Chief Officer	Directorate	Terms of Reference	If delayed, removed, transferred or withdrawn, enter either D, R, T or W	Explanation if delayed, removed, transferred or withdrawn
2	Participatory Budgeting	Finance, Policy and Resources 19/4/16 - The Committee resolved to request officers to develop a Corporate Policy for participatory budgeting and report to this Committee.	At its meeting on 30 April 2018, the Committee noted that this item on the submission of a Participatory Budgeting Policy had been delayed to the Committee's meeting on 13 September 2018.	Neil Carnegie	Early Interventions and Community Empowerment	Customer	GD 7.1		
20									
21	Aberdeen Performing Arts Business Plan Annual Report	To present the annual business plan for consideration.		Craig Innes	Commercial and Procurement	Commissioning	4.1 and 4.4		
22	Aberdeen Heat and Power Business Plan Annual Report	To present the annual business plan for consideration.		Craig Innes	Commercial and Procurement	Commissioning	4.1 and 4.4		
23	Bon Accord Care Annual Report	To present Bon Accord Care's Annual Report.		Craig Innes	Commercial and Procurement	Commissioning	4.1 and 4.4		
24	Community Benefit Policy	To seek approval of the refreshed policy.		Craig Innes	Commercial and Procurement	Commissioning	GD 7.1		
25	Aberdeen Sports Village Business Plan Annual Report	To present the annual business plan for consideration.		Craig Innes	Commercial and Procurement	Commissioning	4.1 and 4.4		
26	Sport Aberdeen Business Plan Annual Report	To present the annual business plan for consideration.		Craig Innes	Commercial and Procurement	Commissioning	4.1 and 4.4		
27	Strategic Allocation of Resources	To report on the strategic allocation of resources, including the draft commissioning intentions and strategy.		Frank McGhee	Commissioning	Commissioning	Purpose 8 and Remit 2.2		
28	Interim Population Needs Assessment	To present the interim Population Needs Assessment for consideration.	The PNA is an iterative process and will be reported to SCC as and when required. The Committee on 30/14/18 agreed to instruct the Director of Commissioning to complete a population needs assessment in accordance with the Terms of Reference. The outcome of the assessment will be reported to the Committee in September 2018.	Frank McGhee	Commissioning	Commissioning	1.1		

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	Report Title	Minute Reference/Committee Decision or Purpose of Report	Update	Report Author	Chief Officer	Directorate	Terms of Reference	If delayed, removed, transferred or withdrawn, enter either D, R, T or W	Explanation if delayed, removed, transferred or withdrawn
2									
	Best Way Forward for Sport in Aberdeen	Council on 6/3/18 agreed to 1. Instruct the Chief Officer – Commissioning & Procurement to bring forward an all options business case report to the September 2018 City Growth and Resource Committee on the best way forward for Sport in Aberdeen given the imminent contractual 10-year agreement with Sport Aberdeen is about to end.	City Growth and Resources Committee agreed on 24/4/18 to transfer this item to the Strategic Commissioning Committee Business Planner as it falls within its Terms of Reference	Craig Innes	Commercial and Procurement	Commissioning	Purpose 1 and Remit 1.3		
29									
30			<b>20 November 2018</b>						
	Final Population Needs Assessment	To present the final Population Needs Assessment for consideration.	The PNA is an iterative process and will be reported to SCC as and when required.	Martin Murchie	Commissioning	Commissioning	1.1		
31									
32			<b>29 January 2019</b>						
	Strategic Outcomes Framework	To present the proposed Strategic Outcomes Framework which is linked to the refresh of the Local Outcome Improvement Plan.		Frank McGhee	Commissioning	Commissioning	2.3		
33									
34			<b>28 March 2019</b>						
	Heat Network Torry - Phase 1	To report on commissioning proposals and to seek approval for the implementation of their procurement.		Bill Watson	Capital	Resources	3.4		
35									
36									
37			<b>April 2019 Onwards</b>						
	Annual Committee Effectiveness Report	To present the annual effectiveness report for the Committee.	May-19		Governance	Governance	GD 7.4		
38									
39									
40			<b>DATE TBC</b>						

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## ABERDEEN CITY COUNCIL

<b>COMMITTEE</b>	Strategic Commissioning Report (SCC)
<b>DATE</b>	June 2018
<b>REPORT TITLE</b>	Customer and Citizen Engagement
<b>REPORT NUMBER</b>	COM/18/013
<b>DIRECTOR</b>	Frank McGhee
<b>REPORT AUTHOR</b>	Martin Murchie
<b>TERMS OF REFERENCE</b>	1,2,3,4.

### 1. PURPOSE OF REPORT

- 1.1 This report gives an overview of current arrangements for engaging and consulting with customers and citizens and makes recommendations to further develop this as part of commissioning approach.

### 2. RECOMMENDATION(S)

That the Committee:-

- 2.1 note the intention that a key principle of the commissioning approach will be the involvement of our citizens.
- 2.2 instruct the Director of Commissioning to undertake an audit and review of existing methods and activity of customer and citizen engagement and report back to the Committee with recommendations which:-
- propose a planned and co-ordinated approach to future engagement and consultation, ensuring that this meets the needs of both the Council and customers and citizens;
  - identify and spread best practice;
  - demonstrate how this will inform future commissioning.
- 2.3 instruct the Director of Commissioning to take forward a joint review, including Council, civic and partner representatives to explore civic representation and involvement, to address the questions detailed at paragraph 3.4.17 below.

### 3. BACKGROUND

- 3.1 The Committee considered a report at its meeting in April 2018 which provided an overview of the Commissioning function which is replacing previously dispersed strategic planning arrangements. The report also advised that a consolidated Business Intelligence Unit had been established to support a single approach to capturing, sharing, analysing and using data to support decision making.

3.2 At the core of a model of strategic planning and data driven decision making are the people who use our services. Understanding their needs and their experiences is an essential element to evidence based commissioning. The report considered by the Committee in April 2018, highlighted that to get that understanding it was necessary to listen to the views, opinions and aspirations of the citizens of the City.

3.3 Across previous strategic planning arrangements, a range of activity and models have been established over many years to engage with people, build that evidence base and use it to inform decision making. In consolidating the Council’s strategic planning through a commissioning approach, there is an opportunity to review the existing arrangements and activity in order to identify and spread good practice, as well identify any gaps or duplication. The Committee has also instructed the development of a “Population Needs Assessment” to inform future commissioning. Within the Population Needs Assessment it is intended to include a strong focus on the “Customer and Citizen Perspective” which will be based on views and feedback which the Council and its partners receive from groups and individuals.

3.4 Overview of Current Consultation and Engagement Activity

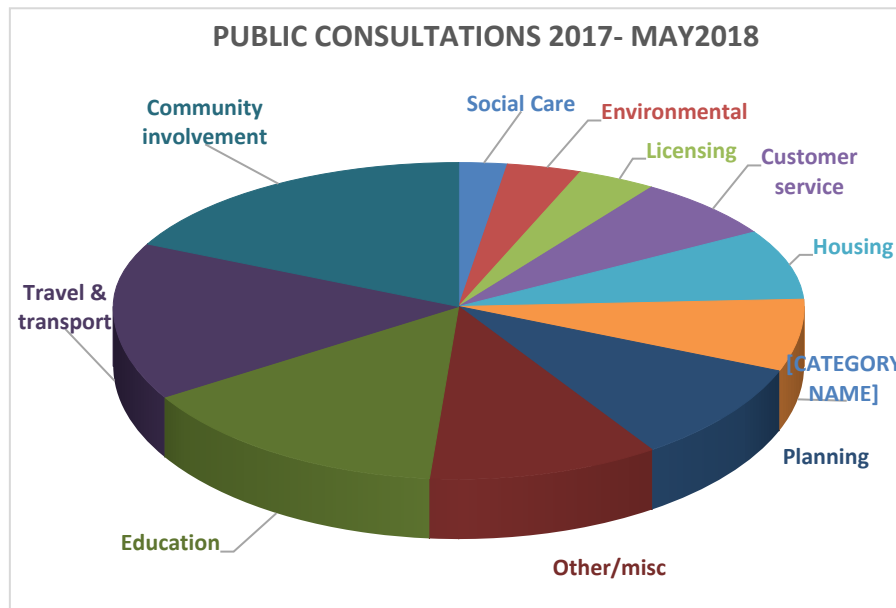
3.4.1 The Council currently undertakes a range of consultation and engagement activity. There are a number of “corporate” methods for this as well as many bespoke arrangements which have been developed and evolved over time by historical services / directorates.

**Citizen Space**

3.4.2 “Citizens Space” is the corporate software package which the Council uses to conduct on-line consultations. These consultations can be “public” or “private” and are accessed on the ACC website Consultation Hub. The volume of consultations undertaken via Citizen Space between January 2017 and May 2018 is shown below.

Public Consultations	79
Private Consultations	168
Total Responses Received	13,878
Average Number of Responses	56%
Users Registered on Consultation Hub	183

3.4.3 A summary of the public consultations show that the subjects covered breakdown as follows:-



3.4.4 It is clear that there is a high level of consultation being undertaken through Citizen Space, across a broad range of topics. To date consultations have been managed by services, rather than co-ordinated through any central process. The number of “Admin Users” for the system is an indication of the spread of its use. As well as the public consultations recorded, there were 168 “private” consultations in Citizen Space. These are often used to collect data/feedback from customers e.g. evaluations of summer activity programmes by community development teams. Whilst Citizen Space keeps a public record of all consultations there is no mechanism in place to ensure feedback and reporting on the outcomes of consultations i.e. “You Said, We Did”.

#### Citizens Panel

3.4.5 “City Voice” is the citizens panel which the Council has managed, on behalf of the Community Planning Partnership, since 2003. There have been 42 questionnaires issued since it was established, currently 2 consultations are completed each year. There is one annual survey sent to all panellists, and a second survey which focuses on the 3 localities. The last consultation was sent to 1,408 panel members, and responses were received from 795. However, a further 42 questionnaires were received from citizens not registered on the panel which brought the total questionnaires received to 837.

3.4.6 The questions included and proposed by all community planning partners, cover a range of issues which affect the community and focus on the four themes which run through the Local Outcome Improvement Plan: Prosperous People, Prosperous Place, Prosperous Economy and Enabling Technology. Findings from the surveys are used to inform and shape service provision and policy and to measure performance. There is a systematic process for reporting back to members of the Panel on actions taken as a result of their feedback.

### Civic Forum

- 3.4.7 The Civic Forum was established in 2002 by the City's Community Planning Partnership and brings together members of Community Councils, Communities of Interest and other Community Groups in the city. It is a consultative forum to represent views, priorities and issues of communities from throughout the city. Members of the Civic Forum sit on a variety of Community Planning groups.

### Community Council Forum

- 3.4.8 The Community Council Forum supports community councils across Aberdeen. It enables them to discuss, share and promote the views of communities throughout the city. The Forum helps to facilitate and coordinate joint activity amongst the community councils where appropriate. There are a number of sub-groups and representatives sit on a range of groups across the Council and also across the Community Planning Aberdeen structure.

### Community Engagement Community Planning Group

- 3.4.9 The Community Engagement Group is one of several groups under the Community Planning Aberdeen (CPA) structure. The group brings stakeholders involved in community engagement together from across the partnership. It links the strategic perspective of the CPA Board and the priorities and perspectives of communities across Aberdeen. Its role is to oversee the implementation of CPA's Engagement, Participation and Empowerment Strategy which was approved in August 2016. The Group is currently developing materials to publicise participation requests across the Partnership and has developed 'easy read' versions of the locality plans.

### Participation Requests

- 3.4.10 The Community Empowerment Act introduced legislation giving community groups new rights to participate in outcome improvement processes with public bodies, including local authorities. They are intended to provide opportunities for community bodies to be pro-actively involved in improving outcomes in their area. The Council has had one informal participation request and one formal request, which is currently ongoing, since the legislation was introduced in 2017. The ongoing request is currently being reviewed. Communication materials are being developed for the Council, and other community planning partners, by the Community Engagement Group.

### Other Consultation and Engagement Methods

- 3.4.11 Satisfaction information from service users is gathered extensively across functions using a range of methods, including the Survey Monkey online tool. Examples of services which gather satisfaction feedback from the public on an ongoing basis or have done so in the past are:
- Roads Maintenance
  - Housing Repairs
  - Housing Management
  - Development Management
  - Building Standards



3.4.12 These surveys directly target members of the public who have recently used our services to measure satisfaction with access, customer experience and overall service received. Responses are generally analysed on a quarterly basis with results being reported to Committee and shared on our website/with tenants. Managers also take a pro-active approach in acting on feedback and use it to improve the service we deliver.

3.4.13 A three-yearly survey of all Council housing tenants is also conducted to establish satisfaction on a range of housing issues such as:

- Overall satisfaction with services
- How well tenants feel they are informed
- Housing quality
- Value for money

3.4.14 Results of this survey are reported to the Scottish Social Housing Regulator, shared with tenants and used by Managers to improve the quality of housing provision.

#### Civic Leadership

3.4.15 The Council, at its meeting on 5<sup>th</sup> March, 2018, considered a report on the Council's governance framework which included a summary of engagement with groups and individuals on the development of "civic leadership" in the City.

3.4.16 The report indicated that the engagement had been welcomed and there was a desire amongst those involved that this must be broadened, deepened and sustained. In considering the report, Council endorsed a number of values and principles upon which further development of civic leadership and engagement can be taken forward. These principles and values (Appendix A) had been suggested by the community representatives who had organised and participated in the engagement. The Council agreed to "refer the development of models for civic leadership and engagement to the appropriate committees in order that they might give active consideration to how civic leadership and collaborative decision making could be strengthened within the areas of their responsibility".

3.4.17 One of the specific issues raised during the engagement was "Civic Representation and Involvement". Questions raised included:-

- how existing engagement groups and forums represented broader views across the city and how we ensure that a fair and appropriate sample of citizens are engaged;
- how they communicated and engaged with each other, with communities and individuals and with statutory bodies, including the Council, NHS Grampian, Police Scotland, Scottish Fire & Rescue Service and other agencies;
- how they could be further supported in these roles; and
- the issues and subjects which existing groups become involved in.

3.4.18 It was suggested that a joint review, including Council, civic and partner representatives, be established to explore these questions. This report recommends that such a review is taken forward.

3.4.19 It is recognised that the engagement referred to above took place within a context of a changing policy and legislation. This includes the Community Empowerment Act which places a duty on public bodies to ensure local “voices” are heard in agreeing priorities, as well as giving community groups the right to participate in public decision making. Other initiatives, such as the Participatory Budgeting models funded and supported by the Council, such as 'Your Streets, Your Say' and 'U Decide', are also relevant to civic leadership.

#### **4. FINANCIAL IMPLICATIONS**

4.1 There are no immediate financial implications in auditing and reviewing the Council’s consultation and engagement activity. Any financial implications either from investment or through improving co-ordination will be included with future proposals.

#### **5. LEGAL IMPLICATIONS**

5.1 All engagement which the Council undertakes must comply with data protection legislation.

#### **6. MANAGEMENT OF RISK**

	<b>Risk</b>	<b>Low (L), Medium (M), High (H)</b>	<b>Mitigation</b>
<b>Financial</b>	None		
<b>Legal</b>	Compliance with data protection legislation.	Low	Information governance policies and practices in place.
<b>Employee</b>	None		
<b>Customer</b>	Accessibility and suitability of engagement and consultative opportunities for all	Medium	Involving customers and citizens in the design.
<b>Environment</b>	None		
<b>Technology</b>	Not working within new data protection regulation.	Low	Information governance policies and practices in place.
<b>Reputational</b>	Engagement and follow up needs to be sustained.	Medium	Engagement of customers and citizens in the design of processes.

## 7. OUTCOMES

<b>Local Outcome Improvement Plan Themes</b>	
	<b>Impact of Report</b>
<b>Prosperous Economy</b>	Engagement and consultation will impact on all four aspects of the LOIP including economy.
<b>Prosperous People</b>	This approach will be mindful of the aspirations of the people of Aberdeen and their views will inform future commissioning.
<b>Prosperous Place</b>	This approach will be mindful of the developing of Place Partnership and will support their work in key areas of the City.
<b>Enabling Technology</b>	Digital considerations will be a key aspect of engagement and consultation as this is developed.

<b>Design Principles of Target Operating Model</b>	
	<b>Impact of Report</b>
<b>Customer Service Design</b>	Commissioning will work with Customer services and other colleagues on the design and delivery of engagement and consultation.
<b>Organisational Design</b>	Co-ordinating customer and citizen feedback supports a whole systems approach in future organisational design.
<b>Governance</b>	There will be close working between the Commissioning function and other governance arrangements.
<b>Workforce</b>	A key aspect of developing this approach will be the development of staff's role in creating relationships with customers and citizens.
<b>Process Design</b>	Co-design of future provision and the development of future commissioning which is informed by customer and citizen feedback will be an important aspect of this new approach.
<b>Technology</b>	The use of technology will be important particularly regarding accessibility, analysis of data and performance.
<b>Partnerships and Alliances</b>	As part of the new commissioning approach we will seek to build on existing shared partnership approaches to engagement and consultation.

## 8. IMPACT ASSESSMENTS

<b>Assessment</b>	<b>Outcome</b>
<b>Equality &amp; Human Rights Impact Assessment</b>	Not required
<b>Privacy Impact Assessment</b>	Not required
<b>Children's Rights Impact</b>	Not applicable

<b>Assessment/Duty of Due Regard</b>		
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**9. BACKGROUND PAPERS**

Target Operating Model – Council Report 11 December 2017  
[Target Operating Model](#) - Council Report 23 August 2017

**10. APPENDICES (if applicable)**

10.1 Appendix A – Principles and Values for Civic Leadership. As agreed by Council on 5<sup>th</sup> March 2018

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Civic Leadership Values and Principles

**Values**

- Independence: We will each make up our own mind.*
- Integrity: Decisions will be made in an open and understandable manner. Information and communication will be open and transparent, and everyone will have the opportunity to influence decisions.*
- Positivity: We will look for solutions not just describe problems.*
- Respect: Understand that everyone has an equal voice and is worth listening to.*

**Principles**

*We will adhere to these values by challenging ourselves, and each other, to:*

- 1. Focus on making the right decision for the people of Aberdeen. Avoid identifying ourselves so personally with a particular position that this in itself excludes constructive discussion.*
- 2. Be prepared to be swayed by the arguments of others and be confident about admitting mistakes or changing our mind;*
- 3. Sustain an intention to involve all relevant stakeholders sharing with them any relevant facts/documents on which decisions and subsequent actions are based.*
- 4. Understand the value of constructive dialogue, listening appreciatively to the thoughts and conclusions of others.*
- 5. Share leadership and responsibility, and take time to communicate the intention of the work we undertake as citizens, and the approach we use to make decisions and initiate actions.*
- 6. Trust and have confidence and optimism in other people's expertise, knowledge and intentions*

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## ABERDEEN CITY COUNCIL

<b>COMMITTEE</b>	Capital Programme Strategic Commissioning City Growth and Resources
<b>DATE</b>	Capital Programme: 23 <sup>rd</sup> May 2018 Strategic Commissioning: 7 <sup>th</sup> June 2018 City Growth and Resources: 19 <sup>th</sup> June 2018
<b>REPORT TITLE</b>	Middlefield/Northfield Place-Making (3rd report)
<b>REPORT NUMBER</b>	RES/18/021
<b>DIRECTOR</b>	Steve Whyte
<b>CHIEF OFFICER</b>	Stephen Booth
<b>REPORT AUTHOR</b>	Bill Watson
<b>TERMS OF REFERENCE</b>	Capital Programme: Remit 1.1  Strategic Commissioning: Remits 2.1, 2.4, 2.5, 3.2 & 3.4  City Growth and Resources: Remit 1.1, 1.2, 1.3, 2.2 & 3.2

### 1. PURPOSE OF REPORT

- 1.1 Capital Programme Committee: to report on development proposals and to seek approval for the principals of their implementation and the incorporation of this project within the capital programme.
- 1.2 Strategic Commissioning Committee: to report on commissioning proposals and to seek approval for the implementation of their procurement.
- 1.3 City Growth and Resources Committee: to report on investment proposals and to seek approval for the use of resources for their implementation.

### 2. RECOMMENDATION(S)

#### 2.1 That the Capital Programme Committee:-

- 2.1.1 approves delivery of improvements in, and around, Heathryfold Park and Auchmill Wood, up to the value of the capital grant allocation from Scottish Natural Heritage.

## **2.2 That the Strategic Commissioning Committee:-**

- 2.2.1 authorises the required procurement exercise(s) for improvements in, and around, Heathryfold Park and Auchmill Wood, up to the value of the grant allocation from Scottish Natural Heritage; and
- 2.2.2 approves the required procurement exercise so as to facilitate the preparation of Active Travel plans for the schools within this Locality.

## **2.3 That the City Growth and Resources Committee:-**

- 2.3.1 approves acceptance of a grant of £270,096 from Scottish Natural Heritage: to undertake additional capital works in the Locality of Middlefield and Northfield;
- 2.3.2 notes the recommendation that an additional allowance of £9415 per annum (plus an allowance for inflation) be made within future revenue budgets for the maintenance of these improvements in, and around, Heathryfold Park and Auchmill Wood, and instructs the Chief Officer Corporate Landlord to submit this to the budget process for 2019/20;
- 2.3.3 approves acceptance of a grant of £64,668 from Scottish Natural Heritage: to extend the employment of the Middlefield Community Ranger to 30<sup>th</sup> September 2019 to work within the Locality of Middlefield and Northfield;
- 2.3.4 gives advanced approval to accept an anticipated grant of £50,000 from Sustrans, to undertake surveys, consultations and develop the designs for further active travel improvements in the Locality of Middlefield and Northfield;
- 2.3.5 approves the expenditure of these grant allocations, from Scottish Natural Heritage and Sustrans;
- 2.3.6 instructs the Director of Resources, in consultation with the Chief Officer Finance (Interim) and Chief Officer CPS, to confirm to their satisfaction that the terms and conditions of the grant funding can be met in relation to this offer of funding from Scottish Natural Heritage (see 4.1 below);
- 2.3.7 instructs the Chief Officer Corporate Landlord to identify a responsible officer to monitor compliance with these grant conditions;
- 2.3.8 approves the preparation of Active Travel plans for the schools within this Locality (Manor Park, Bramble Brae, Heathryburn, West Park, Orchard Brae and Northfield Academy) (in consultation with the pupils) and approves the co-ordination of this consultation with the "I Bike" and "Northfield Cycle Maintenance" projects; and
- 2.3.9 approves the expenditure of grant funding so as to permit the preparation of Active Travel plans for the schools within this Locality.



### **3. BACKGROUND**

3.1 On 20<sup>th</sup> September 2016 the Finance, Policy and Resources Committee instructed:

- that a flood alleviation project to Heathryfold Park proceed (as a project to complement the Manor Walk new Council Housing project); and
- that grants be sought so as to fund additional environmental enhancements to this Locality.

Grants were secured from Scottish Natural Heritage, Sustrans and Nestrans.

The HRA funded flood alleviation works are Practically Complete. The Sustrans funded (active travel) works are due to be complete by early summer 2018.

Contractors have been appointed to undertake the Nestrans (road crossings) and Scottish Natural Heritage (environmental) works. Completion of both is expected later in 2018.

3.2 On 9<sup>th</sup> March 2017 the Finance, Policy and Resources Committee instructed:

- the first tranche of Scottish Natural Heritage funded environmental improvement work to proceed; and
- approved the addition of the Park Ranger post to the staff establishment, for the duration of the SNH grant period.

3.3 On 20<sup>th</sup> September 2017 the Finance, Policy and Resources Committee instructed:

- the first tranche of Sustrans funded active travel improvements to proceed; and
- that the public be consulted on further potential active travel improvements within this Locality.

3.4 The Heathryfold Park Steering Group was consulted as to its priorities for further improvements to the Park and the adjacent neighbourhood. The Group's priorities were:

- further improvements to the play facilities to the Park;
- measures to tackle the damage caused by cars parking on the grass to Heathryfold Circle;
- improvements to Auchmill Wood; and
- extension of the Park Ranger's support for community activities.

3.5 Public consultation events were held at "The Hub" on 28<sup>th</sup> November 2017 and at Northfield Academy on 4<sup>th</sup> December 2017. The initial findings were then tested at a further public consultation event at "The Hub" on 13<sup>th</sup> February 2018.

These consultations and the resultant report were funded by Sustrans. See Background Paper 9.1.

3.6 In addition, Sustrans funded a study and report into the Active Travel links between Middlefield and Auchmill Road. See Background Paper 9.2.

3.7 The Active Travel Reports identified the immediate priorities as being improvements to:

- the routes through Auchmill Wood; and
- the crossings of Provost Rust.

Measures to tackle these priorities are contained within this report.

3.8 The Active Travel Reports also suggested potential improvements to the active travel links to Northfield Academy. Information on the desire lines and barriers to active travel to the Academy was, however, not available.

Measures to tackle this lack of information are contained within this report.

3.9 The Active Travel Reports also identified other potential improvements, but which have longer delivery timescales:

- the Haudagain link road and the de-trunking of Auchmill Road will give rise to the opportunity to establish active travel routes from Middlefield to the Haudagain Triangle redevelopment site; and
- the Greenferns development will give rise to an opportunity to improve the west/east active travel routes along Provost Rust Drive and Provost Fraser Drive.

3.10 "I Bike" is a schools based project promoting cycling, walking and scooting. "I Bike" empowers children, parents and teachers to travel actively, safely and confidently to school - encouraging exercise and reducing traffic congestion. Sustrans fund an "I Bike" officer within Aberdeen City. It is proposed that this officer be located within the Northfield schools cluster for academic year 2018/19, so as to achieve synergies with the recommendations of this report.

3.11 "Northfield Cycle Maintenance" project is a cycle maintenance workshop in the Cummings Park centre's garage. This is allowing the centre to offer targeted cycle maintenance classes to residents / young people in the Northfield area, as well as providing provision to other interested participants / groups across the city (both youth and adult).

Adventure Aberdeen (AA) became approved by the Scottish Qualifications Authority (SQA) in 2016 to deliver cycle maintenance courses for both young people and adults.

Delivery of SQA or Velotech cycle maintenance courses at Cummings Park Community Centre will not only increase Adventure Aberdeen's capacity to deliver cycle maintenance courses, but also enhance the employability options for participants and help with the process of providing a positive destination for young people and prepare them for employment. The SQA

course is delivered at SCQF level 3 and Level 4, and in particular will support those young people who are more suited to vocational training and qualifications, rather than the traditional academic qualifications.

Northfield Academy has booked to send pupils on this course, and there is strong interest from other groups in the Northfield area (including the Northfield Youth Action Group). Police Scotland are also looking at this project as a possible diversionary activity and positive destination for young people on their radar.

3.12 Scottish Index of Multiple Deprivation Data Zones (2016) S01006727, S01006726, S01006729 and S01006724 (located within Middlefield and Northfield) are ranked in the 2nd most deprived decile. The regeneration of the areas of multiple deprivation within Aberdeen (including these) are a priority for Community Planning Aberdeen. The project will (for those with a low disposable income):

- reduce transport costs (releasing income for other needs);
- reduce isolation; and
- encourage healthier lifestyles.

3.13 Attendance levels at Northfield Academy is significantly lower than the City's average: this is linked to high rates of sickness. This low rate of attendance is linked to poorer academic attainment and poorer employment prospects. An environment conducive to healthy living, in the form of improved leisure facilities and increased opportunities for active travel, is expected to reduce incidences of ill health and hence improve school attendance. In addition, studies have shown that children who walk and cycle to school are more alert and are better able to absorb information. It is anticipated that this project will contribute to improved school attainment and, therefore, improved employment prospects.

3.14 The Aberdeen Active Travel Action Plan 2017-2021 recognises the priority that should be given to "Local Improvements", so as to achieve higher proportion of journeys being made on foot and by bicycle.

3.15 This project is aligned with the Nestrans Regional Transport Strategy 2013/2035, "Proposals for Action: Walking and Cycling (IC6)", and "The Cycling Action Plan for Scotland".

3.16 The strategic objectives of these proposals are:

- to continue to improve the quality and accessibility of a Locality which currently has low value amenity: in line with Aberdeen's Open Space Audit & Strategy;
- to continue to improve the path network in this neighbourhood so as to increase and enhance the opportunities for people to get outdoors to relax, exercise and socialise, improving health and wellbeing in one of

Scotland's deprived communities: in line with the objectives of Aberdeen's Core Path's Plan;

- to continue to create a diverse matrix of habitats, connected to the wider greenspace network, so as to support biodiversity: in line with Aberdeen's Nature Conservation Strategy; and
- to continue to build community confidence and capacity through community collaboration during the design, delivery and long-term management processes. in line the City's Strategic Infrastructure Plan, 5 Year Business Plan; Aberdeen - The Smarter City; and the Local Outcome Improvement Plan.

#### 4. FINANCIAL IMPLICATIONS

4.1 The capital cost of undertaking: further improvements to the play facilities to the Park; measures to tackle the damage caused by cars parking on the grass to Heathryfold Circle; and improvements to Auchmill Wood has been estimated £270,096. (The match funding of these works is to be the Sustrans grant for the path improvements across the Park). The net result of which is that the new works be 100% funded by the grant from Scottish Natural Heritage. When the terms and conditions become available these will be passed onto Chief Officer Finance (Interim) and Chief Officer CPS to confirm to their satisfaction that the terms and conditions of the grant funding can be met in relation to this offer of funding.

4.2 The additional annual maintenance of the improved facilities has been estimated as:

- enhanced play area	revenue neutral
- grass verge protection	revenue neutral
- bio-diversity measures	£3500
- path protection works	revenue neutral
- additional paths	£ 5600
- benches and signage	£ 315
<u>Total</u>	<u>£ 9415</u>

4.3 The gross cost of extending the employment of the Park Ranger to 30<sup>th</sup> September 2019 has been estimated at £64,668 (based on known pay settlement information). (The match funding of this is to be time allocated to support this project from the existing permanent staff establishment). The net result of which is that this post is to be 100% funded by the grant from Scottish Natural Heritage.

There is currently an employee in the Middlefield Community Ranger post on a fixed term contract until 31<sup>st</sup> December 2018. The proposal to extend the fixed term contract until 30<sup>th</sup> September 2019 would not have any implications in terms of redundancy rights. It should be noted that redundancy rights would apply after 2 years of continuous service and consideration would need

to be given to this if the fixed term contract were to be extended in future beyond 30<sup>th</sup> September 2019.

- 4.4 The cost of undertaking the surveys, consultations and design development for further active travel improvements in the Locality of Middlefield and Northfield has been estimated at £50,000 from Sustrans. This cost is to be 100% funded by Sustrans. No match funding is required against this grant.

## 5. LEGAL IMPLICATIONS

- 5.1 A legal agreement will be required between the Council and Scottish Natural Heritage with regard to the delivery of these additional works and consequential reporting.
- 5.2 A legal agreement will be required between the Council and Sustrans with regard to the delivery of the design development works.

## 6. MANAGEMENT OF RISK

	Risk	Low (L), Medium (M), High (H)	Mitigation
<b>Financial</b>	Overspend due to unforeseen site conditions and/or tender inflation	M	Contingency allowance has been made. Some flexibility in scope of works  Contract management by officers skilled in this type of work
<b>Legal</b>	no significant or unusual risks		
<b>Employee</b>	no significant or unusual risks		
<b>Customer</b>	no significant or unusual risks		
<b>Environment</b>	no significant or unusual risks		
<b>Technology</b>	no significant or unusual risks		
<b>Reputational</b>	no significant or unusual risks		

## 7. OUTCOMES

<b>Local Outcome Improvement Plan Themes</b>	
	<b>Impact of Report</b>
<b>Prosperous Economy</b>	The recommendations of this report will have a positive economic impact.
<b>Prosperous People</b>	The recommendations of this report will have a positive impact on those that participate in active travel, recreation and environmental activism.
<b>Prosperous Place</b>	The recommendations of this report will have a positive impact on the Locality of Middlefield/Northfield: by providing an enhanced environment and facilitating an enhanced engagement by the citizens of this Locality in their environment and in active travel.
<b>Enabling Technology</b>	Not applicable

<b>Design Principles of Target Operating Model</b>	
	<b>Impact of Report</b>
<b>Customer Service Design</b>	NA
<b>Organisational Design</b>	NA
<b>Governance</b>	NA
<b>Workforce</b>	Positive
<b>Process Design</b>	NA
<b>Technology</b>	NA
<b>Partnerships and Alliances</b>	Positive

## 8. IMPACT ASSESSMENTS

<b>Assessment</b>	<b>Outcome</b>
<b>Equality &amp; Human Rights Impact Assessment</b>	<i>Undertaken</i>
<b>Privacy Impact Assessment</b>	<i>not required</i>

**Children's Rights Impact Assessment/Duty of Due Regard**

*not applicable*

**9. BACKGROUND PAPERS**

- 9.1 Aberdeen Active Travel Action Plan 2017 – 2021, Aberdeen City Council, January 2017
- 9.2 Scottish Index of Multiple Deprivation 2016;  
[http://simd.scot/2016/#/simd2016\\_20pc/BTTTTTTT/13/-2.1549/57.1585/](http://simd.scot/2016/#/simd2016_20pc/BTTTTTTT/13/-2.1549/57.1585/)
- 9.3 Nestrans Active Travel Action Plan;  
[http://www.nestrans.org.uk/wp-content/uploads/2017/02/AcTrAP\\_FINAL.pdf](http://www.nestrans.org.uk/wp-content/uploads/2017/02/AcTrAP_FINAL.pdf)
- 9.4 Nestrans Regional Transport Strategy Refresh;  
[http://www.nestrans.org.uk/wp-content/uploads/2017/02/RTS\\_Refresh\\_FINAL\\_APPROVED\\_BY\\_MINISTER.pdf](http://www.nestrans.org.uk/wp-content/uploads/2017/02/RTS_Refresh_FINAL_APPROVED_BY_MINISTER.pdf)
- 9.5 Grampian Health and Transport Action Plan;  
<http://www.nestrans.org.uk/wp-content/uploads/2018/03/HTAP-Annual-Report-2017.pdf>

**10. APPENDICES (if applicable)**

- 10.1 Middlefield, Heathryfold, Northfield, Active Travel Improvement Priorities Report, Local Transport Projects, January 2018  
[Middlefield-Heathryfold-Northfield Active Travel\\_Final Issue 1.pdf](#)
- 10.2 Auchmill Road, Aberdeen Feasibility Assessment of Cycling Measures Technical Note, Local Transport Projects, December 2017  
[Auchmill Road Cycle Crossing\\_Technical Note Final Issue.pdf](#)

**11. REPORT AUTHOR CONTACT DETAILS**

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## **ADDENDUM**

The Capital Programming Committee, on 23 May 2018, requested clarification of the staff costs previously reported in item 4.3.

It is noted this previously reported item contains an error, the SNH grant of £64,668 is, in fact, a grant towards both fees (£36,686) and ACC's staff costs (£27,982).

The gross cost of extending the employment of the Park Ranger, from 1<sup>st</sup> January 2019 to 30<sup>th</sup> September 2019, has been estimated at £28,874.43 (based on known pay settlement information).



## ABERDEEN CITY COUNCIL

<b>COMMITTEE</b>	Capital Programme Strategic Commissioning City Growth and Resources
<b>DATE</b>	Capital Programme: 23 <sup>rd</sup> May 2018 Strategic Commissioning: 7 <sup>th</sup> June 2018 City Growth and Resources: 19 <sup>th</sup> June 2018
<b>REPORT TITLE</b>	Torry Heatnet Pilot Project (Torry Phase 1A)
<b>REPORT NUMBER</b>	RES/18/022
<b>DIRECTOR</b>	Steve Whyte
<b>CHIEF OFFICER</b>	Stephen Booth
<b>REPORT AUTHOR</b>	Bill Watson
<b>TERMS OF REFERENCE</b>	Capital Programme: Remit 1.1  Strategic Commissioning: Remits 3.4  City Growth and Resources: Remit 1.1, 1.2, 1.3, 2.2 & 3.2

### 1. PURPOSE OF REPORT

- 1.1 Capital Programme Committee: to report on development proposals and to seek approval for the principals of their implementation and the incorporation of this project within the capital programme.
- 1.2 Strategic Commissioning Committee: to report on commissioning proposals and to seek approval for the implementation of their procurement.
- 1.3 City Growth and Resources Committee: to report on investment proposals and to seek approval for the use of resources for their implementation.

### 2. RECOMMENDATION(S)

## **2.1 That the Capital Programme Committee:-**

- 2.1.1 approves the extension of the existing district heating network (located in Balnagask Circle) so as to serve Deeside Family Centre, Balnagask House and Provost Hogg Court.

## **2.2 That the Strategic Commissioning Committee:-**

- 2.2.1 approves the appointment of Aberdeen Heat and Power to design, build and maintain this installation on behalf of the Council (with an estimated design and build contract value of £606,000, and with an estimated heat supply and maintenance contract value of £61,513 per annum) and delegates authority to the Head of C&PS to enter into a legal agreement with Aberdeen Heat and Power Company Ltd for this.
- 2.2.2 approves the establishment of an agreement between the Council and Bon Accord Care, so that the Council becomes the heat supplier to Balnagask House (with an estimated heat supply and maintenance contract value of £14,150 per annum) and delegates authority to the Head of C&PS to enter into a legal agreement with Bon Accord Care Ltd for this.

## **2.3 That the City Growth and Resources Committee:-**

- 2.3.1 approves the utilisation of the previously allocated Council and Interreg North West Europe HEATNET project funding for this purpose.

## **3. BACKGROUND**

- 3.1 The Special Council Meeting convened on 24<sup>th</sup> October 2016 approved the development of:
- an Energy from Waste facility (due to be operational in 2021);
  - a large-scale district heating project in Torry (so as to capitalise on the heat to be generated by the EfW plant from 2021 onwards); and
  - and this early-action, small-scale, district heating project.

- 3.2 Aberdeen Heat and Power (AH&P) designed, built and maintain the existing district heating installation within Torry. This project is a small scale extension of this existing installation. Accordingly, it is considered that AH&P is well placed to be the service provider for this project.

(NB the various options for the Service Provider to the large scale Torry Heat Network will, in due course, be considered as part of the Full Business Case for the larger project).

- 3.3 This Special Council Meeting approved the allocation of £365,000 (at current € exchange rates) to provide match-funding to allow €608,485 of funding to be secured from Interreg North West Europe HEATNET project – so as to assist

the development of transition strategies for delivering low carbon district heat. This transition strategies project included this pilot project.

- 3.4 The Interreg North West Europe HEATNET project seeks to establish transition strategies for delivering low carbon district heat.
- 3.5 Scotland Energy Strategy – The Future of Energy in Scotland was published December 2017. This outlines the objectives towards energy efficiency and carbon reduction targets for Scotland up to 2050 with interim targets of 2020 and 2032. This policy supports the development of district heating as a methodology for decarbonising the heat sector.
- 3.6 The district heating that has, so far, been installed in Aberdeen is regarded as a low carbon standard. It has been constructed of well-insulated, pre-assembled pipes, using relatively low pipe pressures and relatively low flow and return temperatures.
- 3.7 A Feasibility Study has been prepared for this pilot project. See Appendix 10.1: Project Heatnet, Torry Phase 1A District Heating Feasibility Study, prepared by Integrated Energy Utilities, 31<sup>st</sup> December 2017.
- 3.8 This project will employ the same pipe design philosophy, as employed elsewhere in Aberdeen, so as to minimise carbon emissions through pipe design, while also pragmatically meeting the heat and hot water needs of these existing buildings.
- 3.9 This project will:
  - in the short term, provide heating and hot water from the existing boilers within the Heat Centre to Balnagask Circle, and Provost Hogg Court;
  - in the short term, seek to further reduce carbon emissions through the employment of “smart” controls;
  - in the medium term, seek to reduce carbon emissions, to this pilot area, by switching from gas heat to heat from waste incineration (i.e. once the EfW plant is operational) (the gas boilers will then be used as back-up, for whenever the EfW heat source is not available); and
  - in the long term, seek to achieve further carbon savings by utilising recycled heat and heat from a variety of renewable sources that could, conceivably, be developed in this Locality.

#### **4. FINANCIAL IMPLICATIONS**

- 4.1 The capital cost of providing district heating to Provost Hogg Court, Balnagask House and Deeside Family Centre has been estimated as £606,000. See

Appendix 10.1 Project Heatnet, Torry Phase 1A District Heating Feasibility Study, prepared by Integrated Energy Utilities, 31<sup>st</sup> December 2017.

This is within the budget approved by Council on 24<sup>th</sup> October 2016. Which allocated of £365,000 from the General Account (at current € exchange rates) to provide match-funding to allow €608,485 of funding to be secured from Interreg North West Europe HEATNET project.

- 4.2 Immediately after the delivery of this project small revenue savings are anticipated (see Feasibility Study):
- the current all-in annual cost of heating and providing hot water to these properties has been calculated to be £68,648.
  - the all-in cost of providing heat and hot water to these buildings, after conversion to district heating, has been calculated to be £61,513.
- 4.3 It is anticipated that this project will achieve significant revenue savings once the wider Torry network has been established and the Energy from Waste plant supplies heat to this network:
- economies of scale will be achieved; and
  - gas, as a heat source, will be largely replaced by the waste heat from the EfW plant.

## **5. LEGAL IMPLICATIONS**

5.1 This project is part of a wider project: between fourteen north-west European partners and Interreg North West Europe. The lead partner is the City of Dublin Energy Management Agency. See Appendix 10.2.

5.1.1 Interreg North West Europe is a managing authority of the European Regional Development Fund.

5.1.2 The Council is accountable to the Lead Partner for the proper fulfilment of its part in the over-all project as detailed in the Partnership Agreement (attached to this report). The Lead Partner is accountable for proper fulfilment of the over-all project to Interreg North West Europe. The Lead Partner has reviewed these proposals and reported that they are:

*“very thorough and well planned, I am very excited for this pilot and we are very keen that it can get under way as soon as possible so Aberdeen can avail of the HeatNet NWE Interreg 5B funding.”*

5.2 A legal agreement will be required between the Council and Aberdeen Heat and Power for the design, build and maintenance of this proposal. Aberdeen Heat and Power are a Council Arm's Length External Organisation (ALEO) already undertaking similar projects, so this agreement is considered to be normal business. Aberdeen Heat and Power and the Council already have a legal agreement for the maintenance and operation of the existing network within Balnagask Circle. It is envisaged this new agreement will take the form

of an amendment to the existing agreement: retaining the same split of responsibilities. Aberdeen Heat and Power undertake the maintenance. The Council undertake the billing, and own the infrastructure.

5.3 A heat supply agreement will be required between the Council and Bon Accord Care. It is envisaged that this agreement may also require an alteration to the existing operating agreement with regard to the alteration of the heating plant.

5.3.1 This will, be the first time the Council has entered into an agreement to supply heat to another organisation.

5.3.2 It is not envisaged that Aberdeen Heat and Power form an agreement with Bon Accord Care to supply heat:

- so as not to alter the split in responsibilities for the existing heat network; and
- so as not to prematurely inhibit the Council's choice as to how it wishes the large-scale district heating scheme to be operated. (It is intended that a variety of Operating options will be presented to the Council for consideration as part of the Full Business Case for the larger district heating project).

## 6. MANAGEMENT OF RISK

	Risk	Low (L), Medium (M), High (H)	Mitigation
<b>Financial</b>	Currency exchange rates	H	Contingency allowance has been made
<b>Financial</b>	Loss of grant due to Brexit	L	UK and Scottish Governments have given back-stop undertakings
<b>Legal</b>	no significant or unusual risks		
<b>Employee</b>	no significant or unusual risks		
<b>Customer</b>	no significant or unusual risks		
<b>Environment</b>	no significant or unusual risks		
<b>Technology</b>	no significant or unusual risks		

<b>Reputational</b>	no significant or unusual risks		
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## 7. OUTCOMES

<b>Local Outcome Improvement Plan Themes</b>	
	<b>Impact of Report</b>
<b>Prosperous Economy</b>	The recommendations of this report will have a positive economic impact.
<b>Prosperous People</b>	<p>The recommendations of this report will reduce the risk of an adverse impact on the People (many of whom are elderly) within the affected buildings.</p> <p>These proposals will provide greater resilience to the heating provision to these buildings. Currently when a boiler fails, within one of these buildings, there is the risk of loss heating and hot water, particularly if the failure occurs in the winter. This project will reduce this risk.</p>
<b>Prosperous Place</b>	The recommendations of this report will have a positive impact on Torry.
<b>Enabling Technology</b>	The recommendations of this report will have a positive technological learning impact: both within the City and across Europe.

<b>Design Principles of Target Operating Model</b>	
	<b>Impact of Report</b>
<b>Customer Service Design</b>	NA
<b>Organisational Design</b>	NA
<b>Governance</b>	NA
<b>Workforce</b>	NA
<b>Process Design</b>	NA
<b>Technology</b>	Positive
<b>Partnerships and Alliances</b>	Positive

## 8. IMPACT ASSESSMENTS

<b>Assessment</b>	<b>Outcome</b>
<b>Equality &amp; Human Rights Impact Assessment</b>	<i>Undertaken</i>
<b>Privacy Impact Assessment</b>	<i>not required</i>
<b><u><a href="#">Children's Rights Impact Assessment/Duty of Due Regard</a></u></b>	<i>not applicable</i>

## **9. BACKGROUND PAPERS**

- 9.1 The Chancellor issued a statement on October 3<sup>rd</sup> 2016 which guarantees funds for projects which are signed up for European Programmes up until the point at which the UK leaves the European Programme. These conditions will be applied in such a way that committed projects are not disrupted.

<https://www.gov.uk/government/news/further-certainty-on-eu-funding-for-hundreds-of-british-projects>

- 9.2 The Scottish Government advised they have a similar policy, on 2<sup>nd</sup> November 2016.

<https://news.gov.scot/news/eu-funds-guaranteed>

## **10. APPENDICES (if applicable)**

- 10.1 Project Heatnet, Torry Phase 1A District Heating Feasibility Study, Integrated Energy Utilities, 31<sup>st</sup> December 2017
- 10.2 HEATNET NWE PARTNERSHIP AGREEMENT

## **11. REPORT AUTHOR CONTACT DETAILS**

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**PROJECT HEATNET (2018/2019)**

**TORRY PHASE 1A DISTRICT HEATING FEASIBILITY STUDY**

**FOR**

**ABERDEEN HEAT & POWER LTD  
63 COTTON STREET  
ABERDEEN**

**AND**

**ABERDEEN CITY COUNCIL  
TOWN HOUSE  
BROAD STREET  
ABERDEEN**

**WGE ROWE C. ENG.  
INTEGRATED ENERGY UTILITIES  
MIDDLE REACH, RIDLEY HILL,  
KINGSWEAR DEVON TQ6 OBY  
WR 31.12.2017**

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<b>6. Torry Phase 1A District Heating Scheme Development Timescale</b>
<b>7. Project Risks</b>

<b>FIGURES</b>
Figure 1 24 hour seasonal heat demand profile for the present Torry heat load and including the additional loads as described in para. 3.1
Figures 2 Torry Phase 1A District Heating Development Timescale

<b>DRAWINGS</b>
Drawing No 2296777 Design temperatures and control arrangements to meet the Interreg Heatnet objectives for a range of space and water heating applications/methods
Drawing No 22985430 The Torry Phase 1A DH Network
Drawing No 2294565 The Torry Heat Station
Drawing No 22969691 Provost Hogg Court Heating Schematic
Drawing No 22945566 Provost Hogg Court Heating General Arrangement
Drawing No 22969693 Deeside Family Centre Heating Schematic
Drawing No 22945564 Deeside Family Centre Heating General Arrangement
Drawing No 22969692 Balnagask House Heating Schematic
Drawing No 22945565 Balnagask House Heating General Arrangement

## **1 EXECUTIVE SUMMARY**

**1.1** Aberdeen City Council resolved, on 24<sup>th</sup> October 2016, to support the development of district heating in Torry utilising funding from the Interreg North West Europe (NWE) HeatNet, together with match funding from ACC. Aberdeen City Council is one of the fourteen Project Partners participating in this project.

The HeatNet project seeks to establish transition strategies for delivering low carbon district heat.

The Interreg North West Europe HeatNet project is to incorporate six “living labs” which will be employed to develop a HeatNet model and then test and demonstrate it in order to ensure its robustness. These are located the UK, Ireland, Belgium, France, and the Netherlands. Transition Roadmaps plan for roll out of new technical, institutional & organizational arrangements in these 6 living labs (new roles and responsibilities of stakeholders, regulation & policies, spatial planning, business models & viability, connection to finance and markets, acceptance, etc. It is proposed that one of these “living lab” pilot projects will be this project.

The district heating that has, so far, been installed in Aberdeen is regarded as a low carbon standard. It has been constructed of well-insulated, pre-assembled pipes, using relatively low pipe pressures and relatively low flow and return temperatures.

The Torry “living lab” project (termed Torry District Heating Network Phase 1A) will employ the same pipe design philosophy, as employed elsewhere in Aberdeen, so as to minimise carbon emissions through pipe design, while also pragmatically meeting the heat and hot water needs of an existing building portfolio. The Torry Phase 1A project will, in the short term, seek to further reduce carbon emissions through the employment of “smart” controls. In the medium term, it is envisaged that carbon emissions, to this pilot area, will be further reduced by switching from a gas heat source to heat from waste incineration. In the long term, there is the potential to achieve further carbon savings by utilising recycled heat and heat from a variety of renewable sources that could, conceivably, be developed in this locality.

Provost Hogg Court, Balnagask House and Deeside Family Centre are to be connected to the Heat Network under this project. Capital cost has been estimated as £606,000. This is within the budget approved by Council on 24<sup>th</sup> October 2016.

### **1.2 Aberdeen Heat and Power Ltd**

Aberdeen Heat & Power Ltd (AH&P) are a contributing sub-partner to the Interreg North West Europe HeatNet project.

Aberdeen Heat & Power is a ‘not for profit’ company that was set up by Aberdeen City Council in 2002 to develop and operate district heating and CHP (Combined Heat & Power) schemes within the City, with specific aims of alleviating fuel poverty and reducing the Council’s carbon footprint.

To date, Aberdeen Heat and Power has developed four district heating networks supplying heat and hot water to 2350 flats (within 33 multi storey blocks) and to 17 public buildings.

In addition, 10 stand alone multis storey blocks have been converted from electric heating to communal gas heating systems, including the three Torry blocks of Brimmond, Grampian and Morven Courts which form the starting blocks to development of the Torry district heating network.

Carbon emissions from these buildings have been reduced by 45% and typical fuel costs to tenants have been reduced by up to 50% over previous electric heating systems.

Customer satisfaction surveys have indicated that tenants are very satisfied with this new heating system.

The long term aim of the company is to develop the district network across the city and ultimately link the respective energy centres together into a city “ring” which is commonplace in district heating developed countries such as Denmark and Sweden.

The work undertaken in development of district heating by ACC and AH&P over the last 15 years serves to underpin the fuel poverty and carbon reduction aims and indeed, the Aberdeen district heating scheme is seen as a leading exemplar model of district heating in Scotland and beyond.

This is further recognised through the company having received four high profile awards – UK Housing Awards 2008 – Increasing Environmental Sustainability and Outstanding achievement in Housing in the UK and the COSLA Excellence 2008 silver award. In 2013 Aberdeen Heat & Power won a prestigious award for Excellence from Global District Energy Climate Awards, and in 2015 AH&P were very proud to win a VIBES (Vision In Business Environment Scotland) Award under the category of Product or Service.

### **1.3 Scottish Government Policy**

In 2015 the Scottish Government issued a national policy termed National Infrastructure Priority document and on the back of this a Draft Energy Strategy was produced outlining the objectives towards energy efficiency and carbon reduction targets for Scotland up to 2050 with interim targets of 2020 and 2032. These ambitious documents also included sub-strategies for Local Heat and Energy Efficiency Strategies (LHEES) to be developed through Local Authorities with an outline programme for potential funding through the Scottish Energy Efficiency Programme (SEEP). Within these documents there is strong reference and support for the development of district heating as a methodology to decarbonize the heat sector, where these measures are applicable and cost effective.

## **2 4th Generation District Heating (4GDH)**

In order to establish transition strategies for delivering low carbon district heat, the Interreg North West Europe HeatNet project seeks to follow the 4th generation District Heating (4GDH) transition strategy outlined by *H. Lund et al.*<sup>1</sup>

The reporting objectives of the Torry Phase 1A project are:

- a demonstration of what initial steps might be taken in the transition towards 4GDH;
- an identification of some of the barriers to 4GDH; and
- what subsequent steps might be taken in the further transition towards 4GDH

### **Appraisal of transition options towards 4GDH**

One of the underlying targets of 4GDH is to design the building space and hot water heating systems to operate with a flow temperature of circa 70C and to achieve very low return temperatures in the range of 30-40C. District heating systems however must be able to supply buildings having existing central heating systems which have been designed and installed to operate at standard UK design temperatures of 80C Flow: 70C Return. It is necessary therefore to adapt these existing central heating systems by smart control and by taking full advantage of spare

space heating capacity to enable district heating flow temperatures of 70-75C and to achieve seasonal return temperatures in the range of 40-55C. We are calling this 'partial 4GDH'. The following option appraisal therefore considers three options. 1. Do nothing, 2. Develop system to operate at full 4GDH heat distribution network conditions 70C flow: 30C return, and 3. Design and adapt existing building heating systems to enable district heating networks to operate at 'partial 4GDH' conditions of 75C flow: 45-55C return (as Aberdeen Heat & Power standard design practice)

## **2.1 Do nothing**

### Advantages

- no inconvenience to residents/building users; and
- saving in officer time, that would otherwise be spent on other Council priorities.

### Disadvantages

- loss of inward investment;
- loss of opportunity to replace existing boilers (which have a finite life);
- loss of opportunity to reduce gas consumption;
- loss of opportunity to reduce heating maintenance costs;
- loss of opportunity to extend the current heat network, in preparation for the envisaged Energy from Waste project (and the low carbon/low heating cost opportunities that this will provide);
- loss of opportunity to develop a transition strategy towards 4GDH; and
- a diminishing of ACC/AH&P's status as being amongst Europe's district heating leaders.

### Summary

Not recommended due to:

- loss of inward investment opportunity;
- failure to meet the requirements of the Interreg North West Europe HeatNet project, and
- loss of stepping stone towards Council's Heat Network strategy for Torry.

## **2.2 Full 4GDH**

### Advantages

- realisation of inward investment opportunity;
- maximisation of opportunity to develop a transition strategy towards 4GDH; and
- maximisation of ACC/AH&P's status as being amongst Europe's district heating leaders.

### Disadvantages

- It is noted that the principal objectives for a full 4GDH system are better suited to new build designs rather than retrofit
- maximum inconvenience to residents/building users;
- reduction in number of premises that would be improved;
- expensive: existing heating radiators etc would have to be replaced;
- expensive: hot water boost would have to be provided;
- expensive: the thermal properties of the building fabric would also have to be greatly improved;
- diminution of opportunity to replace existing boilers (which have a finite life);
- diminution of opportunity to reduce gas consumption;
- diminution of opportunity to reduce heating maintenance costs; and
- diminution of opportunity to extend the current heat network, in preparation for the envisaged Energy from Waste project (and the low carbon/low heating cost opportunities that this will provide).

- For this project, required replacement of the existing underground pipework and distribution pumping

### Summary

Not recommended due to:

- the potential adverse impact on the Council's over-all Heat Network strategy for Torry: with its emphasis on the early and widespread reduction in fuel poverty, and
- risk of non-delivery

### **2.3 Partial 4GDH**

#### Advantages

- realisation of inward investment opportunity;
- minimal inconvenience to residents/building users;
- maximum number of premises that would be improved;
- cost effective: existing heating radiators etc would not have to be replaced;
- cost effective: hot water boost would not have to be provided;
- cost effective: the thermal properties of the building fabric could be improved at a later time;
- maximisation of opportunity to replace existing boilers (which have a finite life);
- maximisation of opportunity to reduce gas consumption;
- maximisation of opportunity to reduce heating maintenance costs;
- maximisation of opportunity to extend the current heat network, in preparation for the envisaged Energy from Waste project (and the low carbon/low heating cost opportunities that this will provide);
- maintenance and operation of the existing plant and equipment currently supplying heat to the three multis at Balnagask Circle: and
- maintenance of ACC/AH&P's status as being amongst Europe's district heating leaders

#### Disadvantages

- diminution of opportunity to develop a transition strategy towards 4GDH

### Summary

Recommended due to:

- realisation of inward investment opportunity;
- compliance with the requirements of the Interreg North West Europe HeatNet project; and
- maximum compliance with the Council's Heat Network strategy for Torry: with the opportunity to develop the detail of a Heat Network strategy that will enable ACC to maximise the reduction in fuel poverty in Torry.

## **3. THE TORRY PHASE 1A DISTRICT HEATING DEVELOPMENT PROPOSAL UNDER THE INTERREG HEATNET PROGRAMME**

### **3.1 The Proposed Torry Phase 1A District Heating extension.**

The present Torry scheme currently supplies three 52 dwelling multi-storey blocks: Morven, Brimmond, and Grampian Courts from a gas fired heat station.

It is proposed to connect and adapt three Aberdeen City Council institutional buildings under this HeatNet Torry Phase 1A scheme with an annual floor area, existing boiler capacity, annual fuel consumption and estimated annual useful heat requirement as follows:

**BUILDINGS PROPOSED FOR PHASE 1A DISTRICT HEATING EXPANSION**

Building	Present annual gas heating Consumption [kWh]	Estimated annual heat requirement[kWh]	Existing Installed boiler capacity	Gross floor area [m2]
Provost Hogg Court [sheltered housing]	1,176,202	823,341	2 x 200kW + 2 x 34kW HWS	4400
Balnagask House [sheltered housing]	417,557	168,000	2 x 104kW	1200
Deeside Family Centre	200,381	140,267	2 X 70kW + 1 x 34 kW HWS	1000

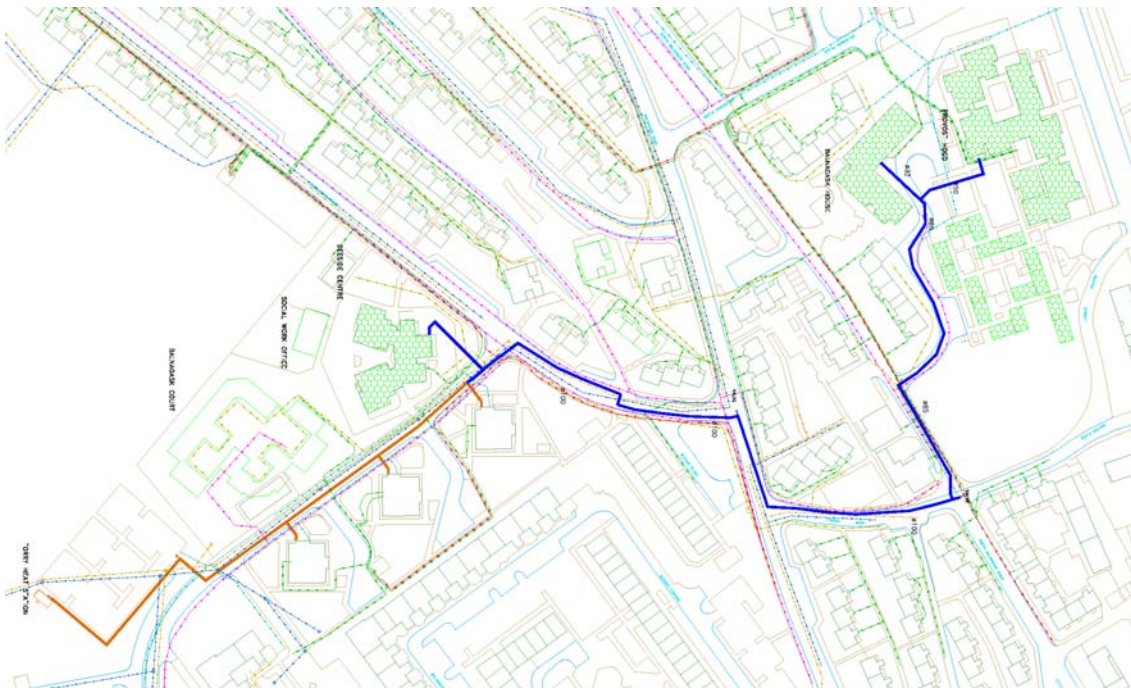
**3.2 Planning for the wider Torry District Heating Network**

In designing and setting out the Phase 1A DH scheme consideration must be given to the longer term district heating network to serve the wider Torry area and possibly beyond. In the design of the Heatnet project, as an extension of the existing Torry district network, the aspects of arterial network sizing have been considered and taken into account, and can be enveloped into a wider system in the future. This is part of the future proofing ethos that has been adopted by AH&P over successive years of development of the district networks in the City.

System operating pressure is a primary consideration taking in account ground level variations throughout the district heating network. The present Torry district heating system and the AH&P schemes serving the central and Northern areas of the City have been designed to operate with a base pressure of 4 bar.g. Local topography and potential future connections to the City Centre have been taken into account in the design of this proposed system.

**3.3 Recommended Heat distribution mains to serve the Torry Phase 1A buildings**

Drawing 22985440 (appended) shows the Torry Phase 1A DH Network plan showing the extension from the existing DH system to connect the three buildings listed in para. 3.1above.



### **3.4. The suitability of the existing Torry Heat Station capacity to supply the additional Phase 1a Heat Loads**

The 24 hour seasonal heat demand profile for the present Torry heat load and including the proposed additional loads described in para 3.1 above is shown by Figure 1. This indicates a peak winter month demand of 800kW for the three existing multi-storey blocks, Provost Hogg Court, Balnagask House and Deeside Family Centre.

The existing Torry heat generating station has 6 boilers with a combined capacity of 600 kW as shown by Drawing No 2294565. The Heat Station has space for 4 further boilers or a CHP generator giving a total potential capacity of 1000 kW. The existing 125mm gas supply connection, the heat distribution pumping, and control system is sized and arranged for the ten x 100kW boiler capacity. A small alteration would be required to the heating and gas pipework within the heat station

It is also possible to retain the existing two x 200kw boilers at Provost Hogg Court for peak load and standby operation.

The proposal under this Torry Phase 1A development is to retain the existing 6 x 100kW boilers in the Torry heat station and to incorporate the Provost Hogg boilers. The Torry heat station can be extended at relatively low cost should the scheme be developed beyond Phase 1A.

### **3.5. Connection & adaptation of building heating systems to meet Intereg Heatnet 4<sup>th</sup> generation system objectives**

Surveys and technical assessments have been carried out on each building under consideration for connection in Torry Phase 1A to determine the required adaptation to meet Partial 4th Generation operating temperature and efficiency targets. All the building heating and hot water systems to be connected were originally designed at the UK standard design flow temperature of 80degC but use will be made of design margin on radiators and smart controls to reduce the seasonal operating temperature of the buildings heat distribution systems in the new design for all three buildings.

The proposals for the building heating system connection and adaptations in each building are as follows:

#### **3.5.1 Provost Hogg Court.**

The Provost Hogg Court Sheltered Housing heating system is in two parts, the first is constant temperature circuit operating at 80C fed directly off the boiler header serving 15 Bungalows which are separate from the main building system which is heated by an outdoor temperature compensated system.

A district connection comprising isolation valves, pipeline strainer, pressure differential regulation valve and a heat meter will be located in the existing boilerhouse as shown by Drawings No 22969691 and 22945566.

A simple radiator system is installed within each bungalow together with hot water service hot water cylinders. A new temperature control will be installed to reduce the flow temperature to the lowest temperature to take advantage of the radiator sizing margin. A two port regulating control valve will inject water at 70C into this system from the district heating system. The distribution flow temperature to the bungalows will be set at the lowest temperature calculated following design margin checks on the radiators. New low feed velocity thermostatic radiator



valves with and pre-setting to maintain a 15C minimum temperature differential will be installed on each radiator. The hot water service control valves to each cylinder will be fitted with new two port control valves to control the cylinder temperatures at 55degC. Inverter control will control the circulating pressure differential at around 2m head to minimize heat distribution pumping power consumption and to provide all the two port control valves with conditions for good control authority.

The second outdoor temperature compensated heating system serving radiators and will be controlled at the lowest seasonal temperature. An inverter pump drive will control the circulating pressure differential at around 2m head to minimize heat distribution pumping power consumption and to provide all the two port control valves with conditions for good control authority. Checks will be made on radiator design margins and thermostatic radiator valve condition.

The gas fired hot water heating boilers will be replaced by a non-storage plate exchanger heater with control as shown by drawing 22969691. Hot water will be circulated at 55degC into the existing secondary system

It is proposed that the existing high efficiency boilers will be retained with new shunt and heat distribution pumps for standby heat top up to the district heating system. The boilers and pumps will be brought on when the measured district heating network circulating pressure differential falls below 4m.

### **3.5.2 Deeside Family Centre**

The Deeside Family Centre heating circuit is an outdoor temperature compensated system serving radiators and some fan convectors. The proposed district heating connection and control is shown by Drawings Nos 22969693 and 22945564.

A district connection comprising isolation valves, pipeline strainer, pressure differential regulation valve and a heat meter will be installed in the existing boilerhouse, to supply a heating temperature of 70degC.

Checks will be made on radiator design margins and the building heating system will be controlled at the lowest seasonal temperature. An inverter pump drive will control the circulating pressure differential at around 2m head to minimize heat distribution pumping power consumption and to provide all the two port thermostatic control valves with conditions for good control authority. and thermostatic radiator valve condition. Two port solenoid valves will be fitted to each fan convector to stop circulation when the fans are switched off

A gas fired hot water heating boiler will be replaced by a non-storage plate exchanger heater with control as shown by drawing 22969693. Hot water will be circulated at 55degC into the existing secondary system.

### **3.5.3 Balnagask House**

The proposed district heating connection and control is shown by Drawings Nos 22969692 and 22945565.

The district connection comprising isolation valves, pipeline strainer, pressure differential regulation valve and a heat meter will be located in the existing boilerhouse, to supply a heating temperature of 70degC.

The Balnagask House sheltered housing heating system is in two circuits both with outdoor temperature compensated system serving radiators and will be controlled at the lowest seasonal temperature. An inverter pump drive will control the circulating pressure differential at around 2m head to minimize heat distribution pumping power consumption and to provide all the two port control valves with conditions for good control authority. Checks will be made on radiator design margins and thermostatic radiator valve condition.

Gas fired hot water service storage vessels will be replaced by a non-storage plate exchanger heater with control as shown by drawing 22969692. Hot water will be circulated at 55degC into the existing secondary system

### 3.6 Estimated Capital Cost of Torry Phase 1A Development

The Torry Phase 1A district heating scheme estimated capital costs comprising the district heating heat distribution main network extension the building connection and adaptation works to meet Partial 4th Generation standards as described in Sections 3.1 to 3.6 above are summarised as shown below. The estimated costs are based upon competitive tender rates and Aberdeen Heat & standard design and construction management procurement arrangements with direct purchase of all materials and individual contracting with specialist companies for each part of the installation works.

<b>SUMMARY OF ESTIMATED CAPITAL COST TORRY PHASE 1A</b>	
<b>Description</b>	<b>Estimated Cost [£]</b>
Heat Distribution Mains for Phase 1A expansion	£333,000
Provost Hogg Boilerhouse Connection and System Adaptation	£75,000
Balnagask House Connection and System Adaptation	£38,000
Deeside Family Centre Connection and System Adaptation	£32,000
Works contingency	£24,000
Administration costs 15%	£75,000
Currency contingency 5%	£29,000
<b>TOTAL ESTIMATED CAPITAL COST</b>	<b>£606,000</b>

### 3.7 Carbon Dioxide [CO2] Emission Reduction

As the existing buildings are already served by gas boilers and the proposed arrangement is also served by gas boilers, the proposed system extension to supply three ACC institutional buildings for this project would achieve only a small CO2 reduction, resulting from having boilers operating as part of controlled scheme as opposed to having numerous smaller less efficient boilers.

It is envisaged that significant reduction in CO2 emissions will be achieved in the medium term, should the scheme be further extended and be supplied with heat from Energy from Waste (EfW), rather than from gas fired boilers. These savings could be as follows:

<b>CO2 SAVING FOR TORRY PHASE 1A WHEN HEAT IS SUPPLIED FROM EfW plant</b>		
Annual gas consumption	CO2 emission from gas firing	Reduction in annual CO2 emission
3,413 MWh	198 kg/MWh	675,803 kg/annum

#### 4 HEAT COSTS

The Schedule below sets out the present estimated annual cost for space and hot water heating for each building, based upon the following operating factors and the present gas unit price:

- Average Annual Individual Gas Boiler Efficiency: 75%
- Gas Boilerhouse Operational Electricity Consumption: Allowance of 1% of Gas Consumption at 12p/kWh Electricity Cost
- Annual Gas Heating Maintenance & Call-out Charge: £5/kW system capacity
- Depreciation at 8% of boiler plant replacement capital cost
- Administration

<b>EXISTING INDIVIDUAL GAS HEATING</b>	<b>Provost Hogg Court</b>	<b>Balnagask House</b>	<b>Deeside Family Centre</b>	<b>Total</b>
Annual Gas Consumption [kWh]	1,176,202	417,557	200,381	1,794,140
Gas Unit Price including CCL (p/kWh)	1.755	4.498	1.755	
Gas Daily charge (£/annum)	£4,869	n/a	£1,099	£5,968
Gas Cost [£/annum]	£20,642	£18,782	£3,517	£42,941
Boilerhouse Electrical Running Cost [£/annum]	£1,411	£288	£240	£1,939
Annual Boiler Plant Maintenance & Call Out [£/annum]	£2,500	£600	£600	£3,700
Depreciation	£6,600	£4,000	£2,000	£12,600
Administration of bills	£500	£500	£500	£1,500
<b>Total Annual Cost [£]</b>	<b>£36,522</b>	<b>£24,170</b>	<b>£7,956</b>	<b>£68,648</b>

The above figures for maintenance are based on norms for this type of establishment. At this time is has not been able to fully establish the true maintenance figures for individual buildings so therefore a true annual cost is not presented. Suffice to say that there will be financial savings from maintenance for each building through not having individual gas boiler servicing and gas safe checks, although the operating costs of the energy centre must be taken into account.

<b>DISTRICT HEATING OPERATING COST (55% proportion of costs for three ACC Institutional buildings)</b>	<b>Total</b>
Gas consumption Proportion (kWh / annum) (includes network losses)	1,918,352
Gas Price p/kWh	1.755
Daily charge proportion	£6,870
Gas cost	£33,532
Energy Centre Electricity proportion	£1,718
Maintenance and Call Out Proportion	£3,529
Depreciation	£11,600
Administration of bills	£800
Management Charge (monitoring, inspection)	£3,464
<b>Total Annual Cost [£]</b>	<b>£61,513</b>

The estimated annual operating cost saving in the heating cost to the three buildings from the proposed adaptation to 4GDH and connection to the existing Torry District network is therefore £7,135. This saving will increase further when the district heating network connects to the EfW station or alternative renewable sources.

## **5. HEAT METERING AND CHARGING SYSTEM**

Where a statutory requirement for individual building and dwelling heat metering system exists AH&P have currently adopted the ISTA system of automatic remote meter reading and pre-payment billing. The system is compliant with the Heat Network (Metering & Billing) Regulations 2014. It is envisaged that this system will be installed to Provost Hogg Court, Balnagask House and Deeside Family Centre

## **6. TORRY PHASE 1A DISTRICT HEATING SCHEME DEVELOPMENT PROGRAMME TIMESCALE**

The programme for development of the Torry Phase 1A district heating scheme is shown by Figure 2. The activities under this programme would be as follows:

The programme assumes agreement between ACC and AHP to proceed with the scheme by the end of March 2018 including the installation agreement sign off.

The Tender documentation is to be completed during April to enable a 4 week tender period in May 2018.

District heating mains installation period July to October 2018

Connection to the Provost Hogg Court boiler house and adaptation of the internal heating system would be carried out between August and November 2018

Connection and internal heating adaptation work to Balnagask House, and Deeside Family Centre office would take place between August and November 2018

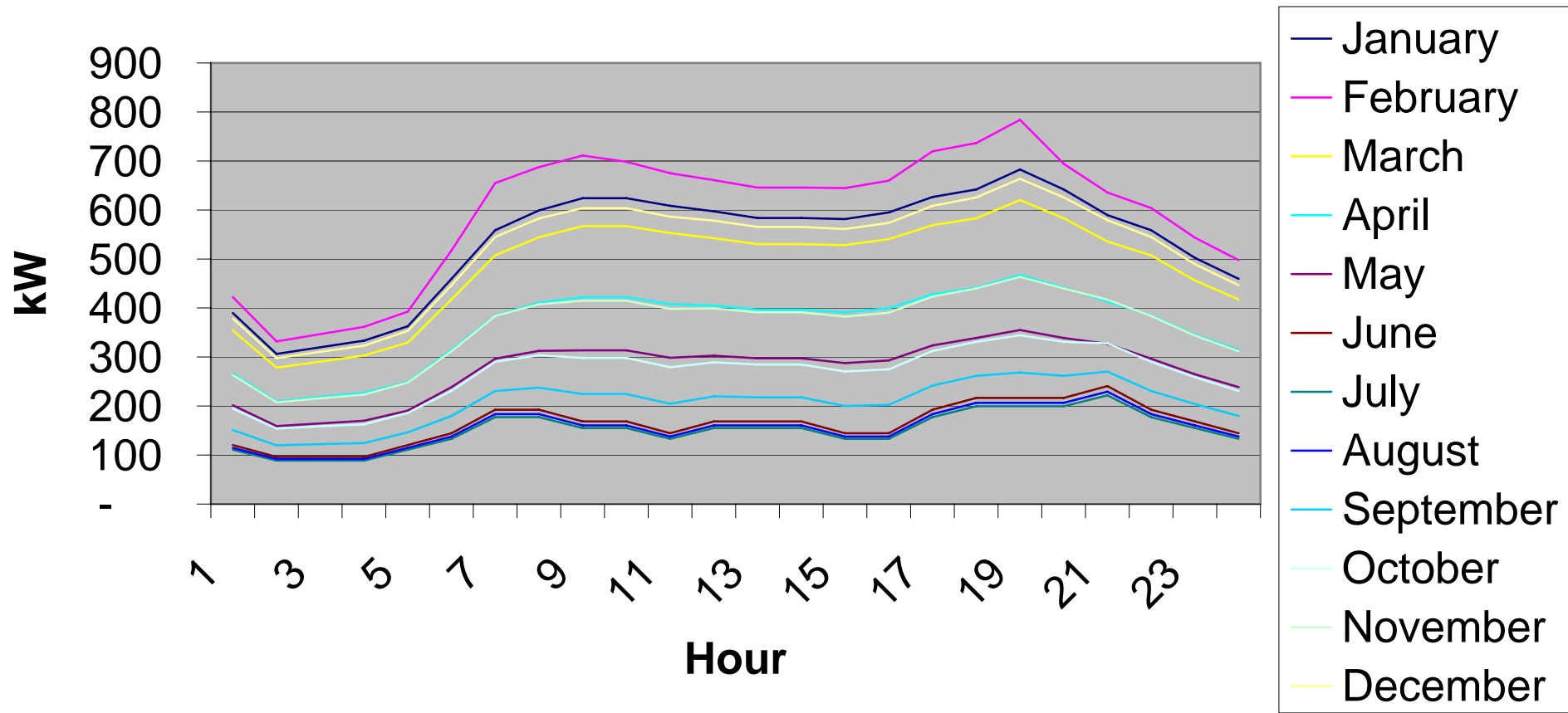
## **7. Project Risks**

- The proposed timescale for project completion is almost directly co-incident with the Brexit programme. There is therefore uncertainty over exchange rate and as such a contingency of £29k has been applied to the capex costs.
- The peak winter loading for the entire scheme has been calculated at 800kW, which would leave a 20% margin on total boiler capacity for comfort, but this relies on all boilers being available at the time of peak loading. This risk has been considered as acceptable. Under much of the operating year the existing six boilers in the Torry boiler house would be adequate to supply the entire system, leaving the Provost Hogg Court boilers for standby duty. It is noted that this risk will be greatly reduced when expected EfW heat supply becomes available. It is also noted that the resilience of the heat provision system (prior to EfW) will be a considerable improvement on resilience of the current heating systems.

## **References**

- 1 '4<sup>th</sup> Generation District Heating Integrated Smart Thermal Grids into future sustainable Energy Systems'. Lund; Werner; Wiltshire; Svendsen; Thorsen; Hvelplund; and Mathiesen. Published by Elsevier, 2014.**
- 2 Heat Generation Technology Landscaping Study, Scotland's Energy Efficiency Programme (SEEP) Ref - 4<sup>th</sup> Generation District Heating Technology.**

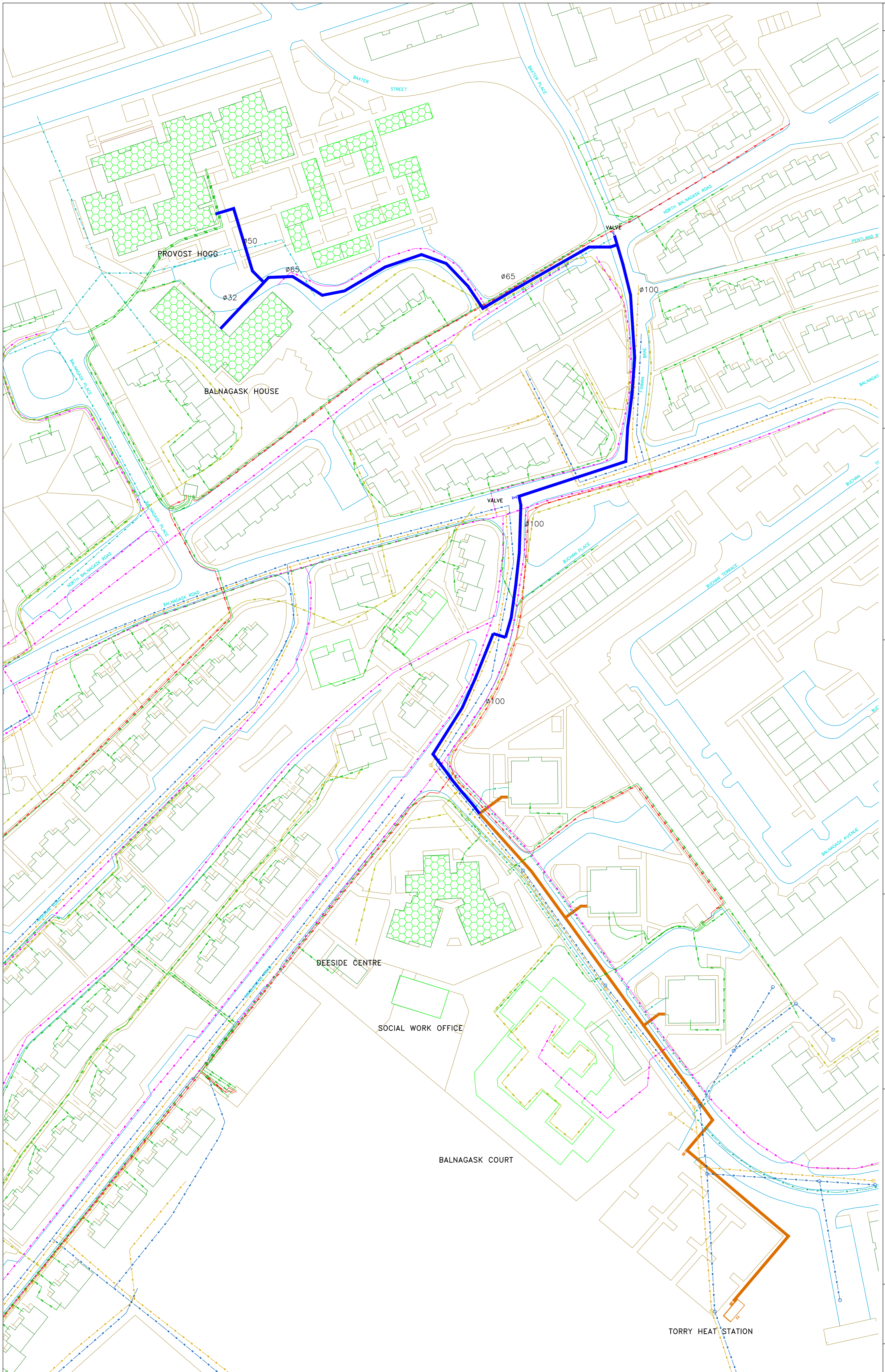
### Figure 1- Torry Phase 1A Average 24 Heat Demand Profile in each month



**FIGURE 2 TORRY PHASE 1A DISTRICT HEATING PROJECT DEVELOPMENT TIMESCALE**

ACTIVITY	2017		2018											
	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1 Feasibility Study Completion	█	█												
2 Receive comments and questions on feasibility study	█	█												
3 Approval by AHP/ ACC			█	█										
4 ACC/AHP Agreement signed off					█									
5 Planning Application Heat Distribution mains						█	█							
6 Design drawings and specifications for Contract						█								
7 Invite Tender for Works Contracts							█							
8 Place contracts								█						
9 DH Mains Stage 1A installation to Provost Hogg Court									█	█	█	█		
10 Connection and Internal System Upgrading to Provost Hogg Court										█	█	█	█	
11 Connection and Internal System Upgrading to Balnagask House										█	█	█	█	
12 Connection and Internal System Upgrading to Deeside Centre										█	█	█	█	

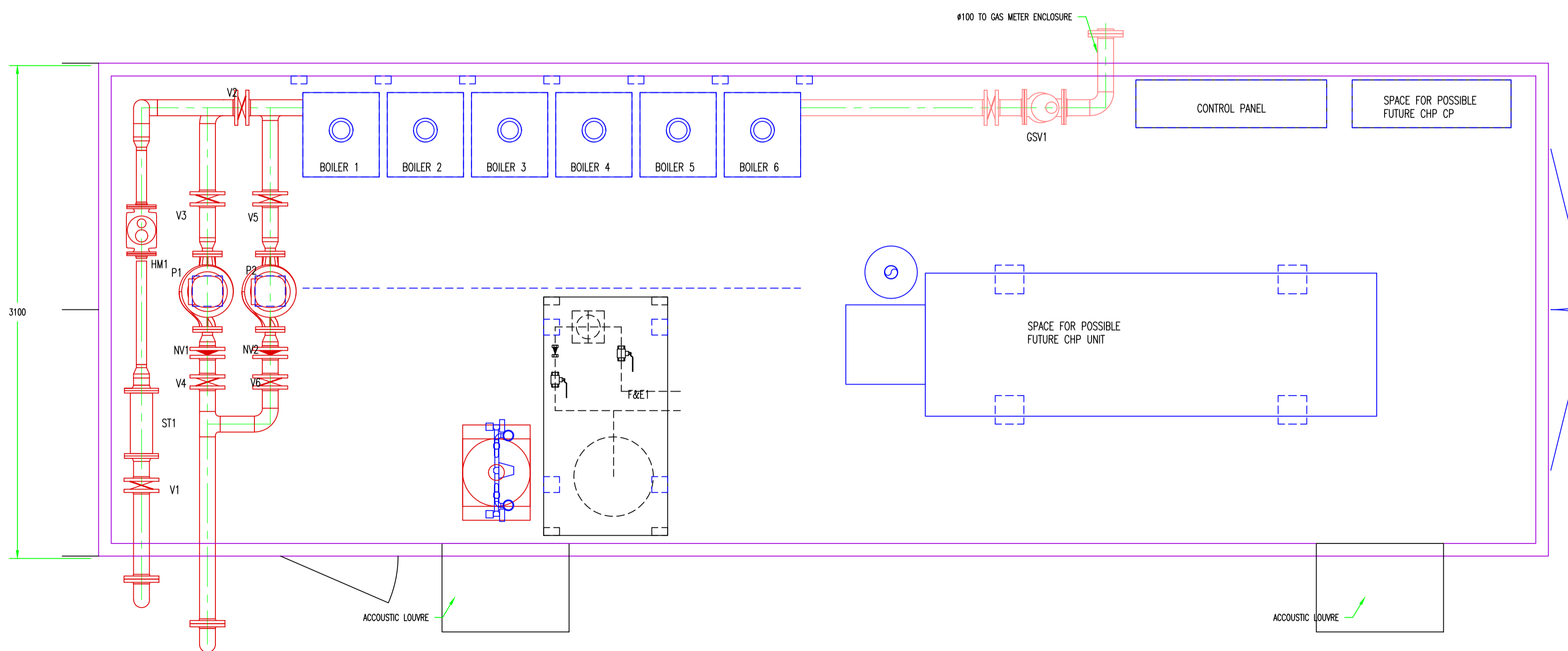
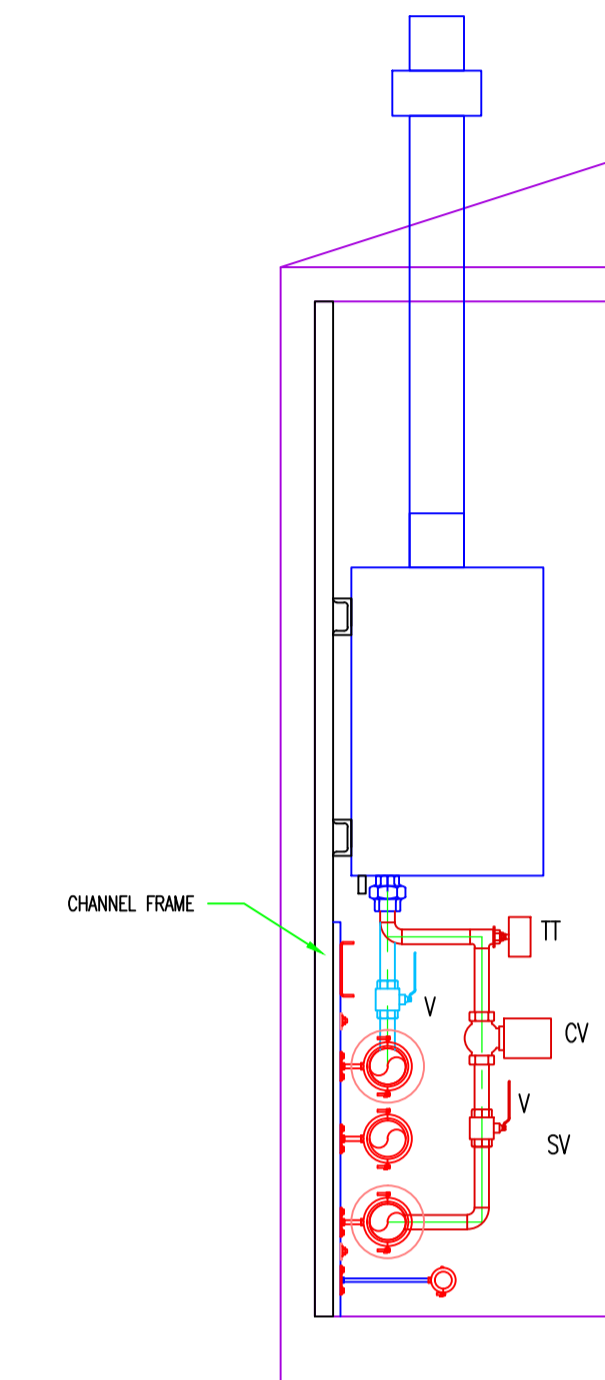
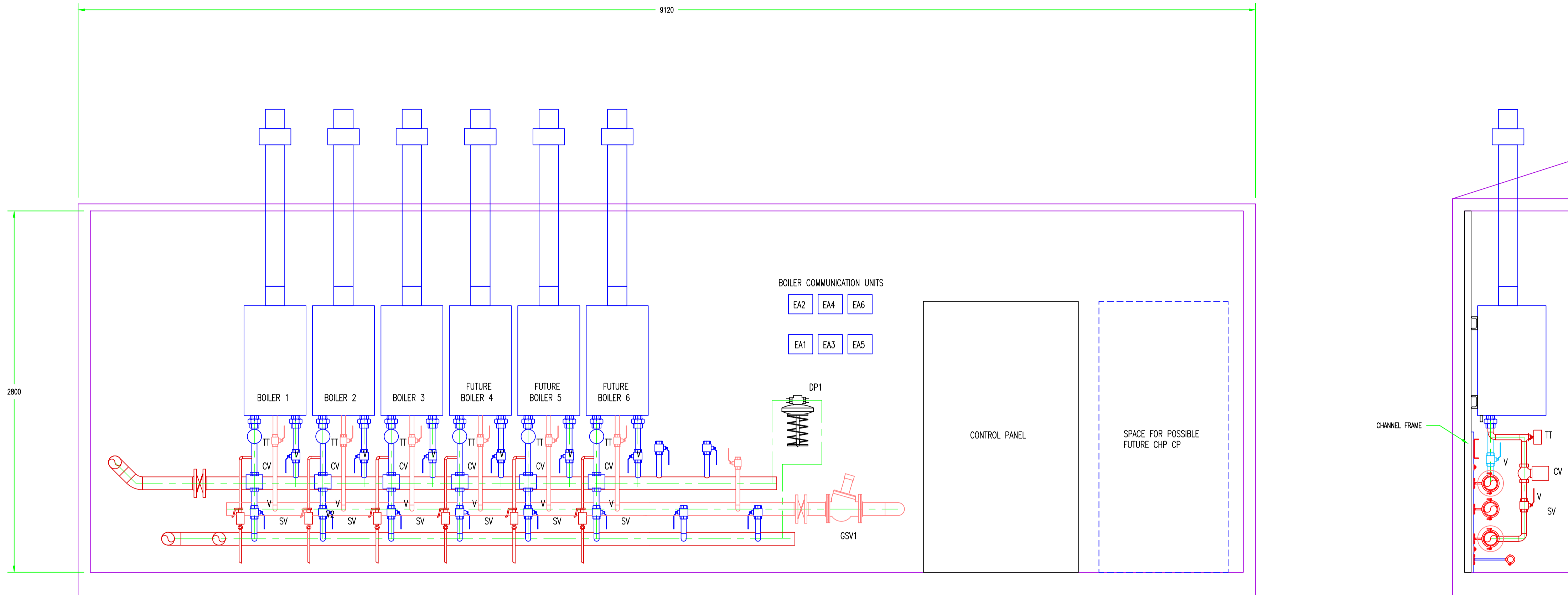




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Drawing Number 22985440





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Project  
TORY DISTRICT HEATING SCHEME

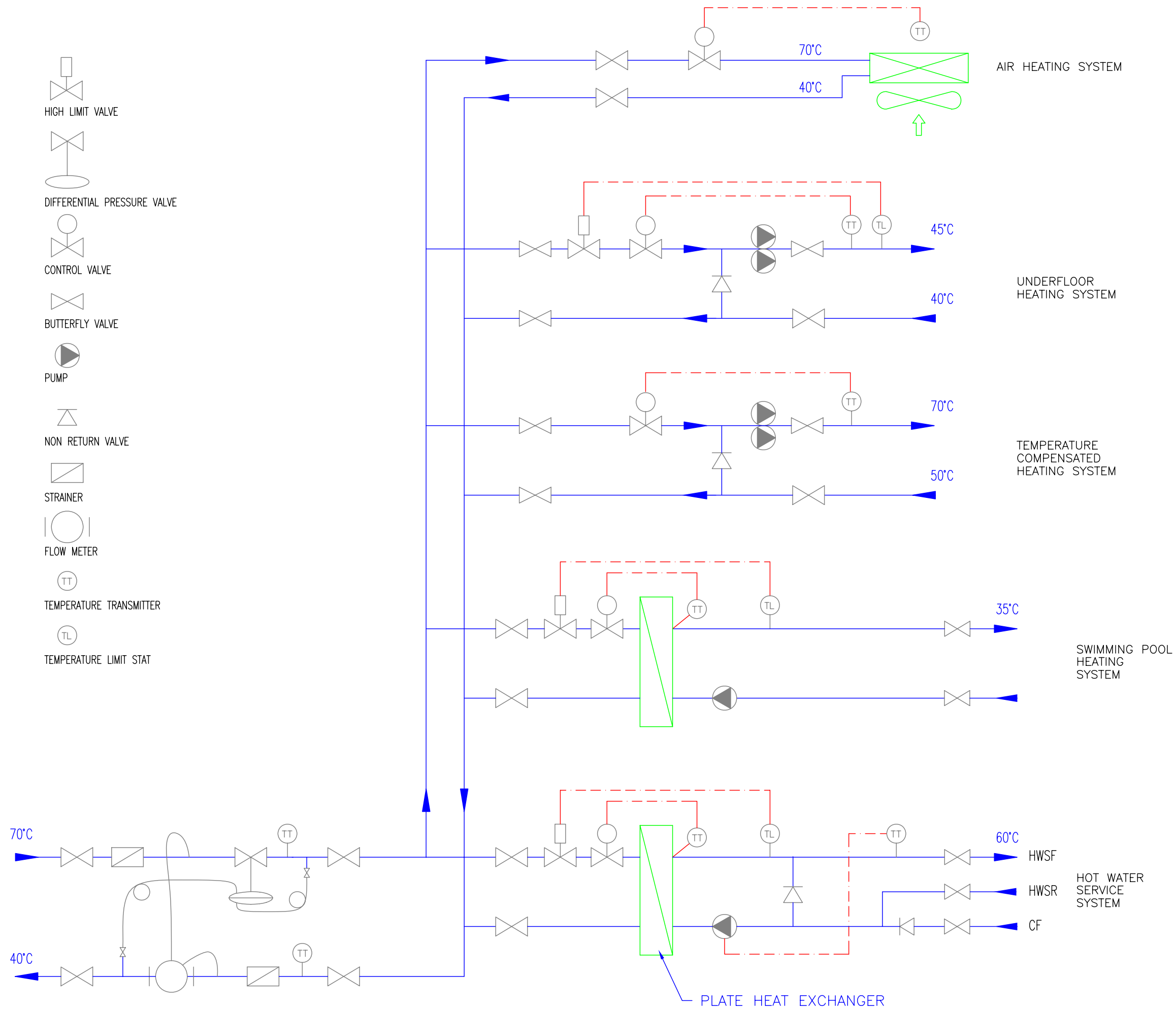
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HEAT STATION PIPEWORK & EQUIPMENT GENERAL ARRANGMENT











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ABERDEEN HEAT & POWER





-  HIGH LIMIT VALVE
-  DIFFERENTIAL PRESSURE VALVE
-  CONTROL VALVE
-  BUTTERFLY VALVE
-  PUMP
-  NON RETURN VALVE
-  STRAINER
-  FLOW METER
-  TEMPERATURE TRANSMITTER
-  TEMPERATURE LIMIT STAT

Rev	Description	By	Chk'd	Date
A	ISSUED FOR INFORMATION	D.P.	W.R.	30.10.17
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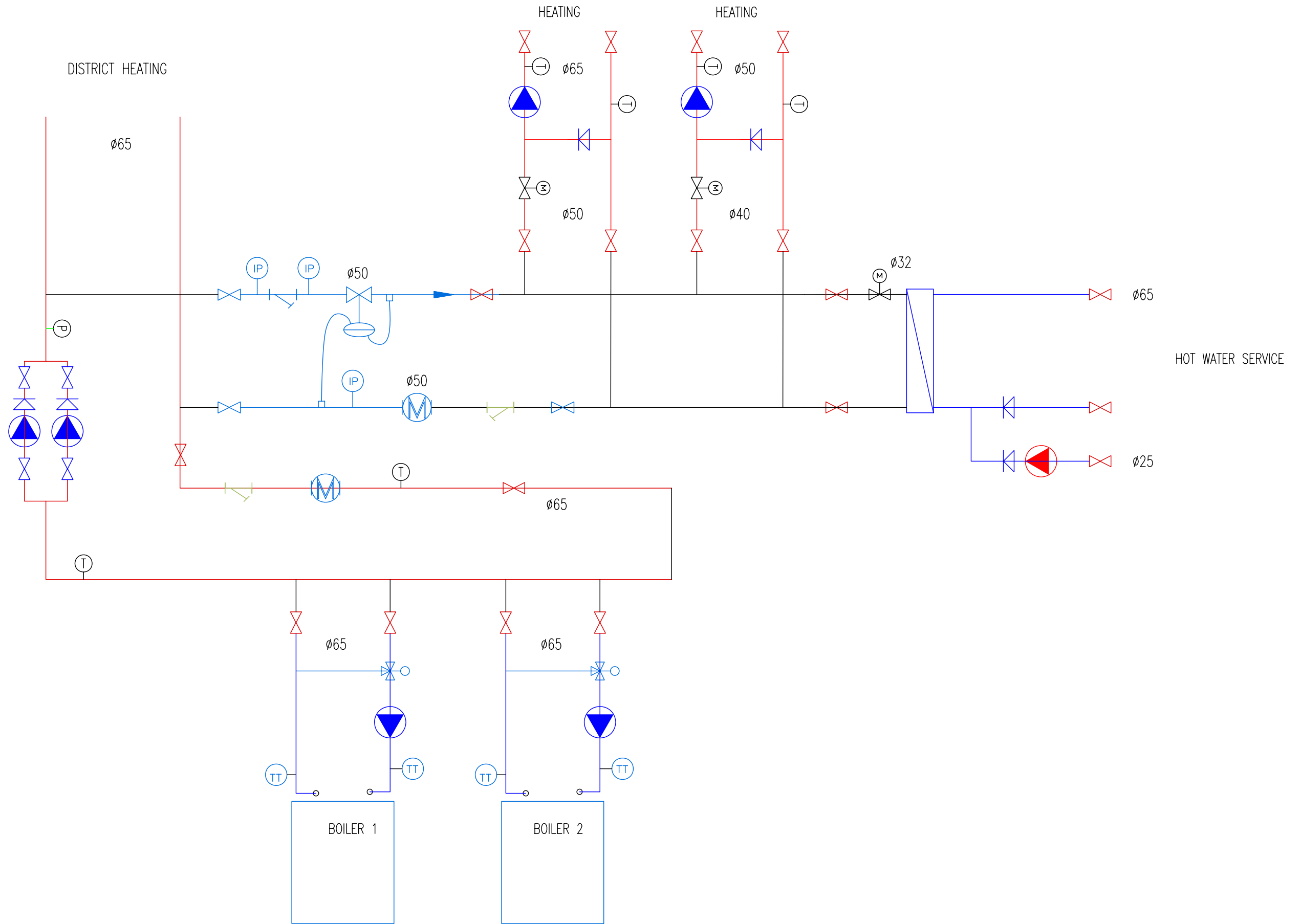
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Subject  
 HEATING CONNECTION AND CONTROL TO NON DOMESTIC

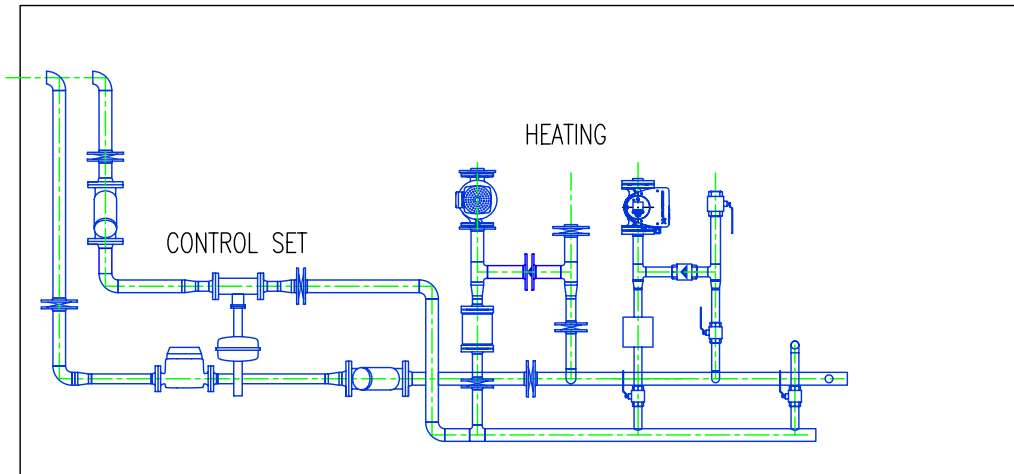
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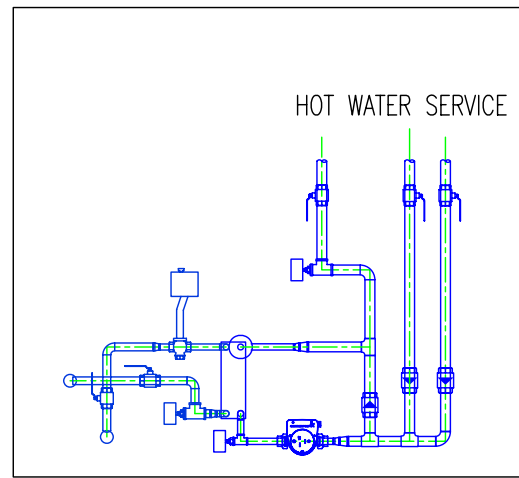
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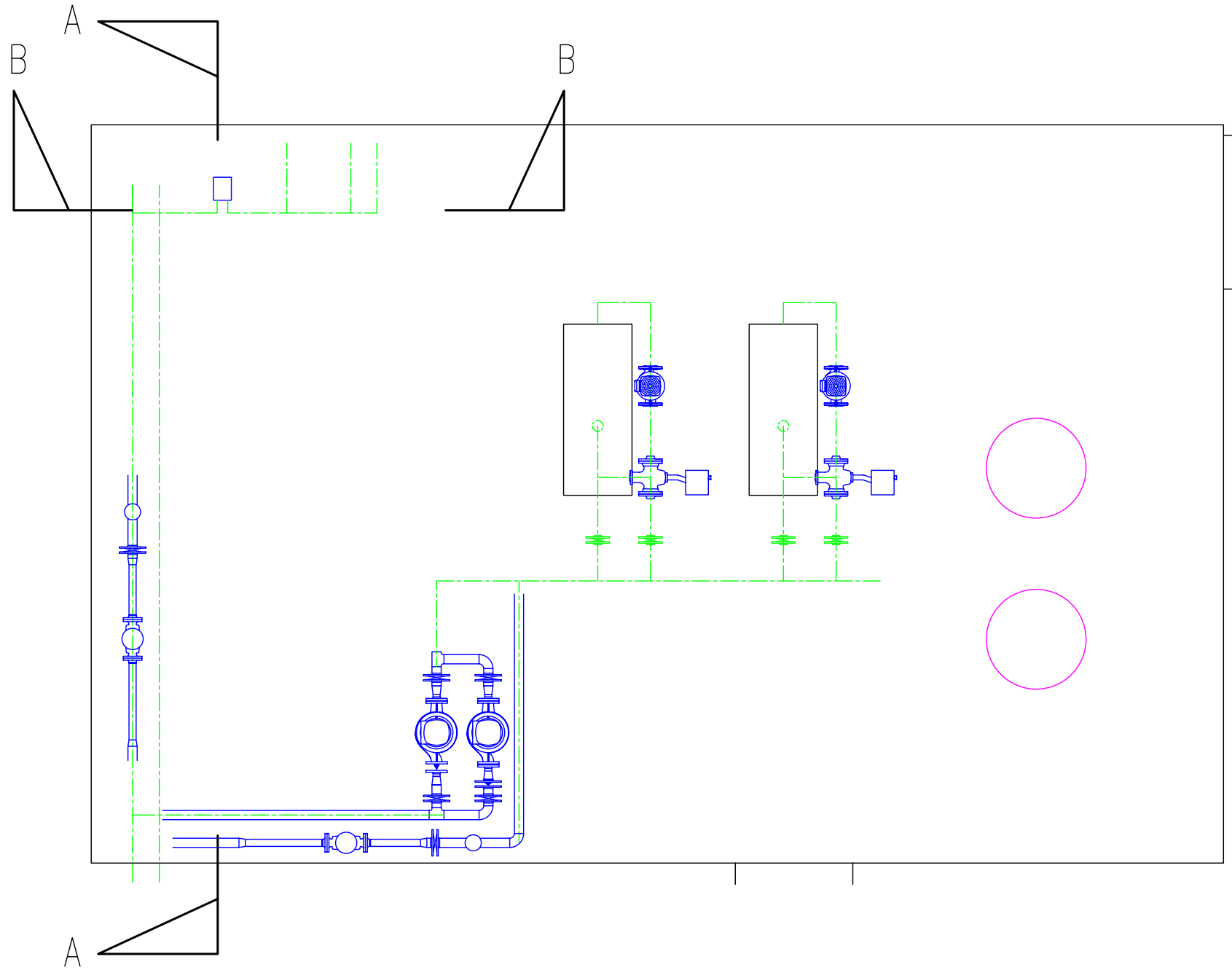
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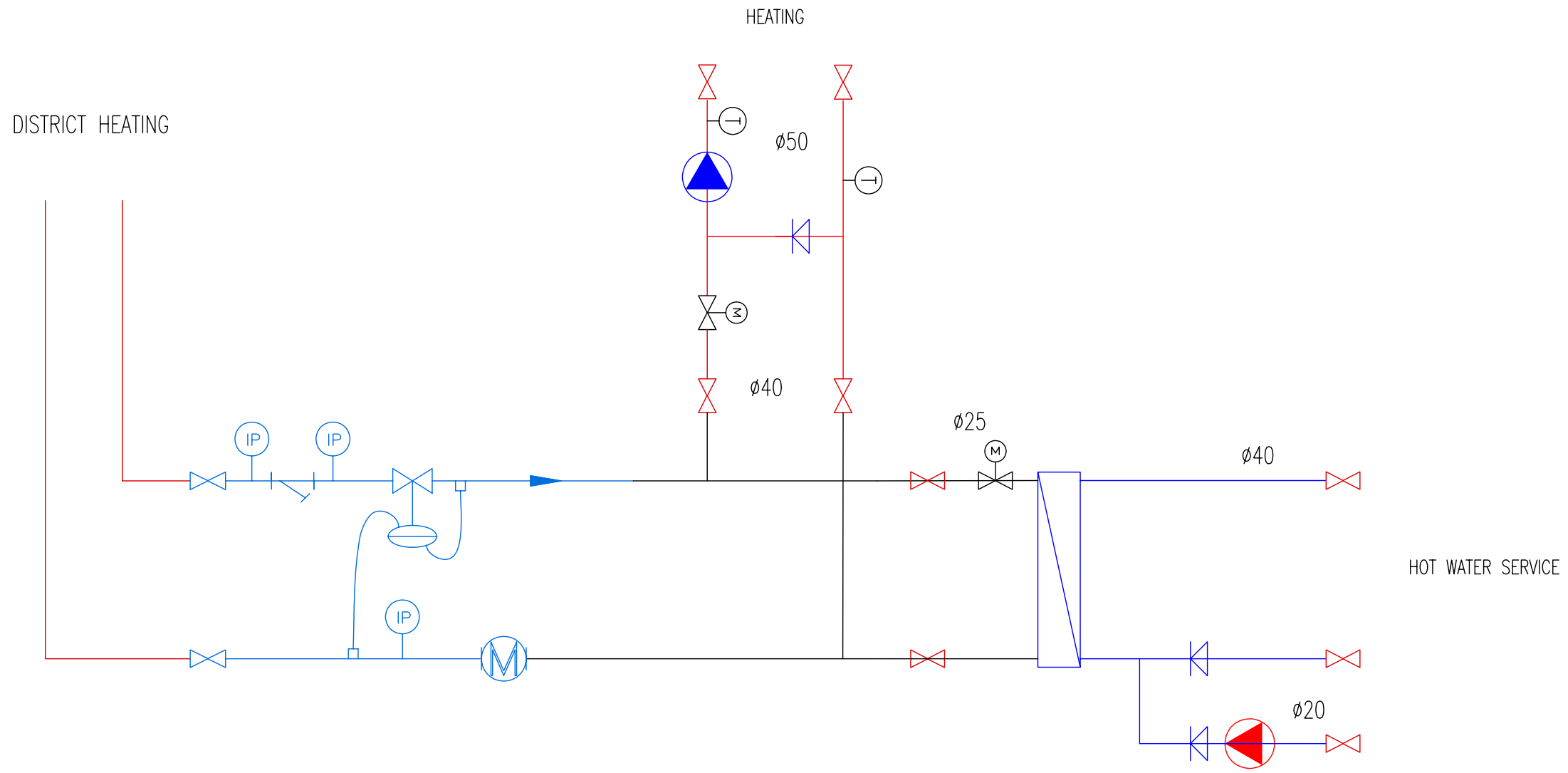
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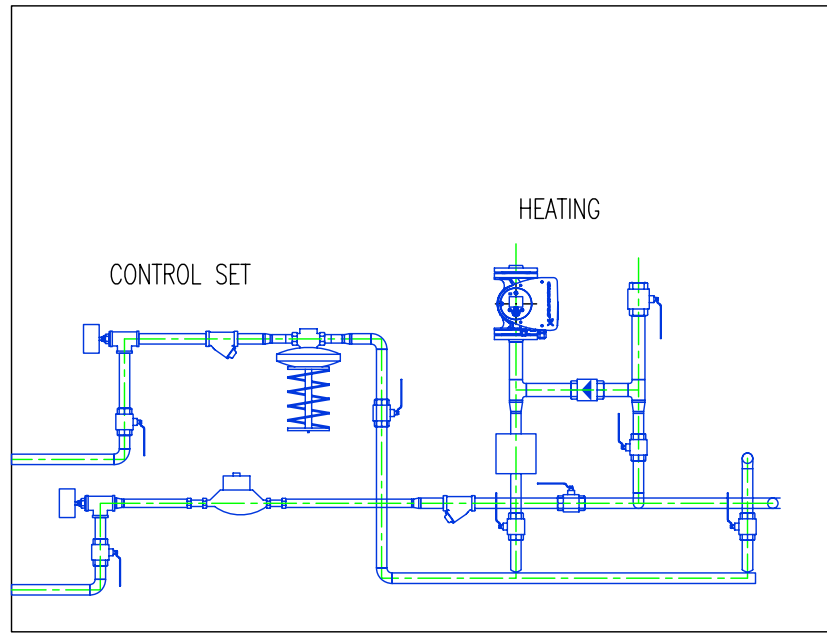
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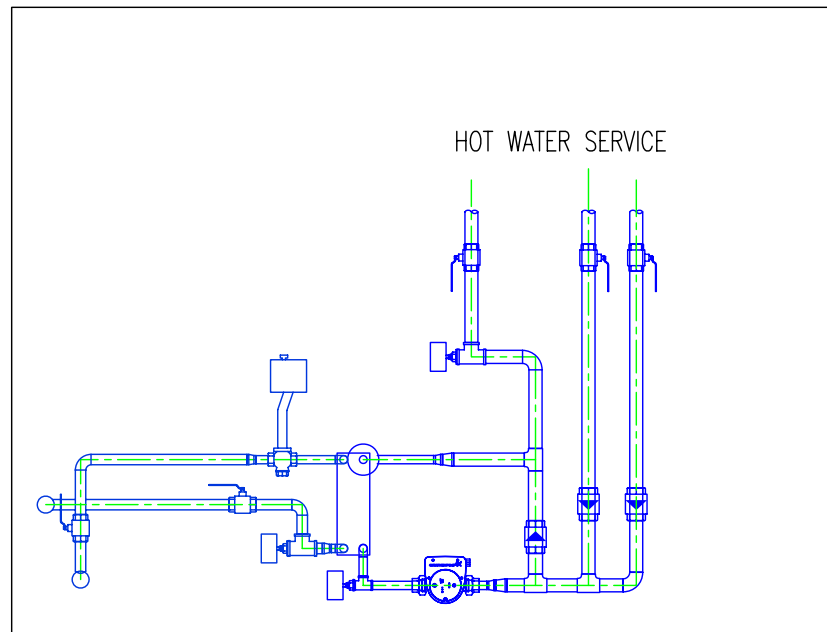
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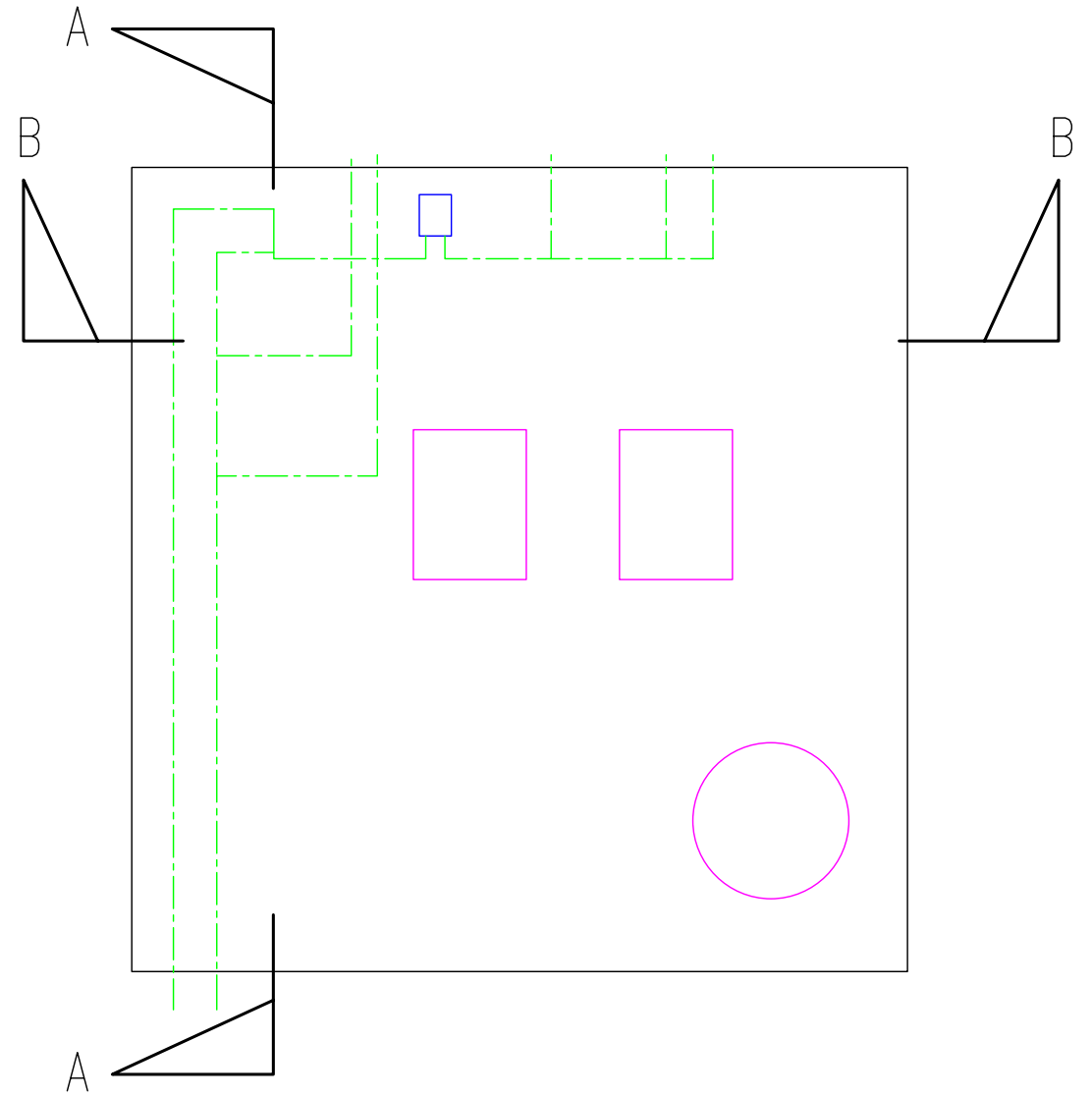
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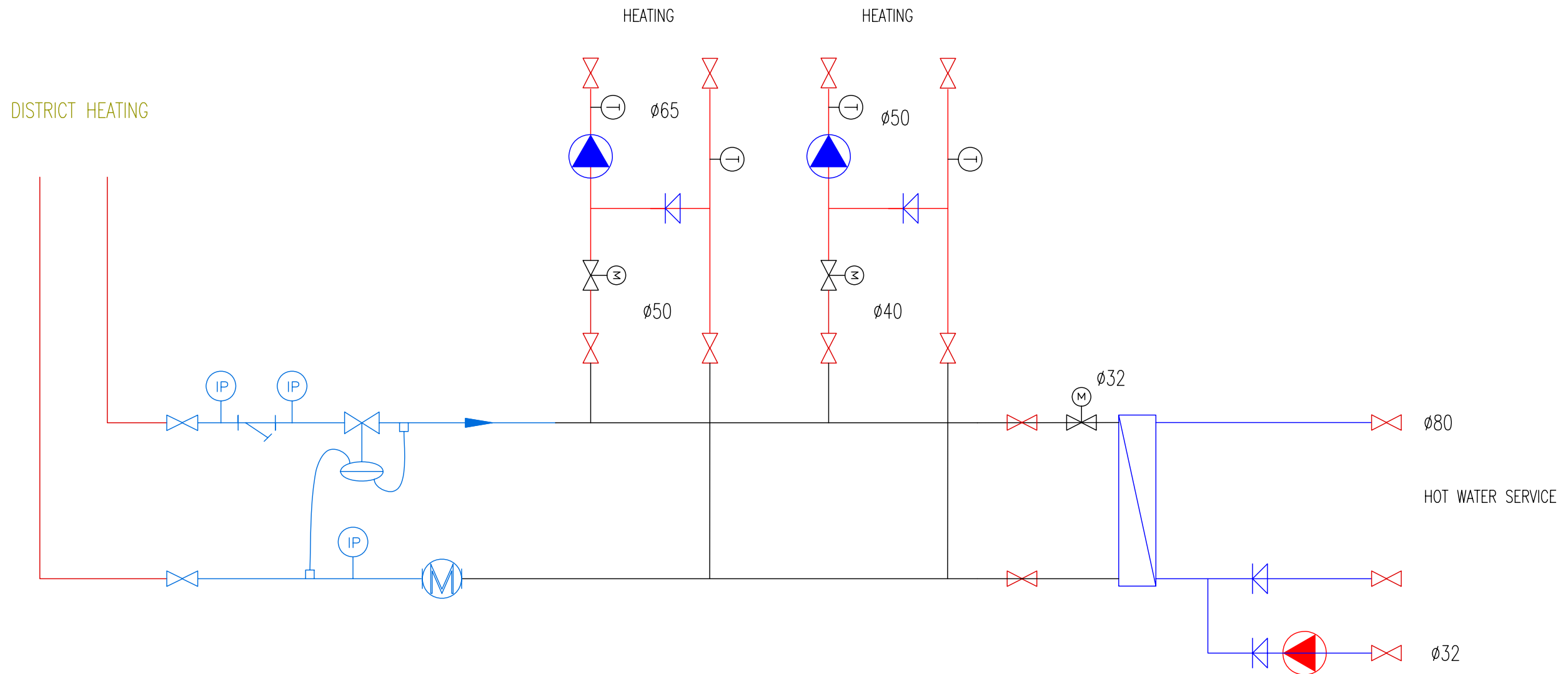
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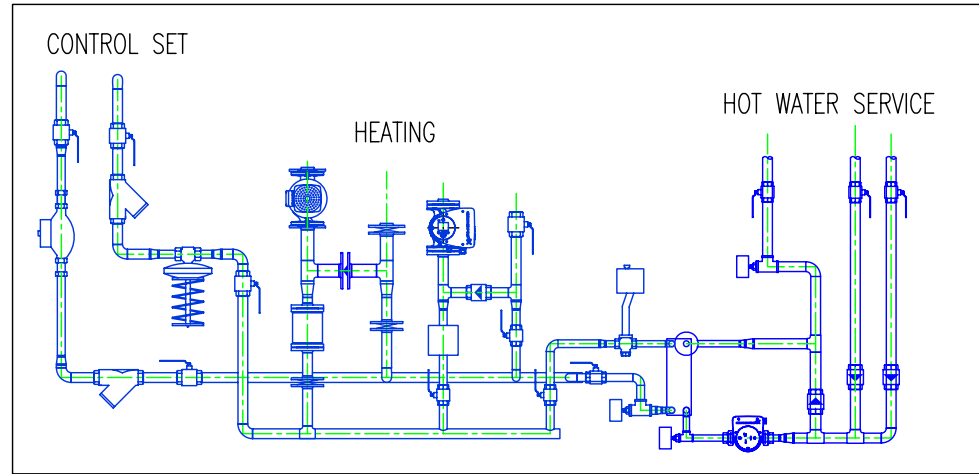
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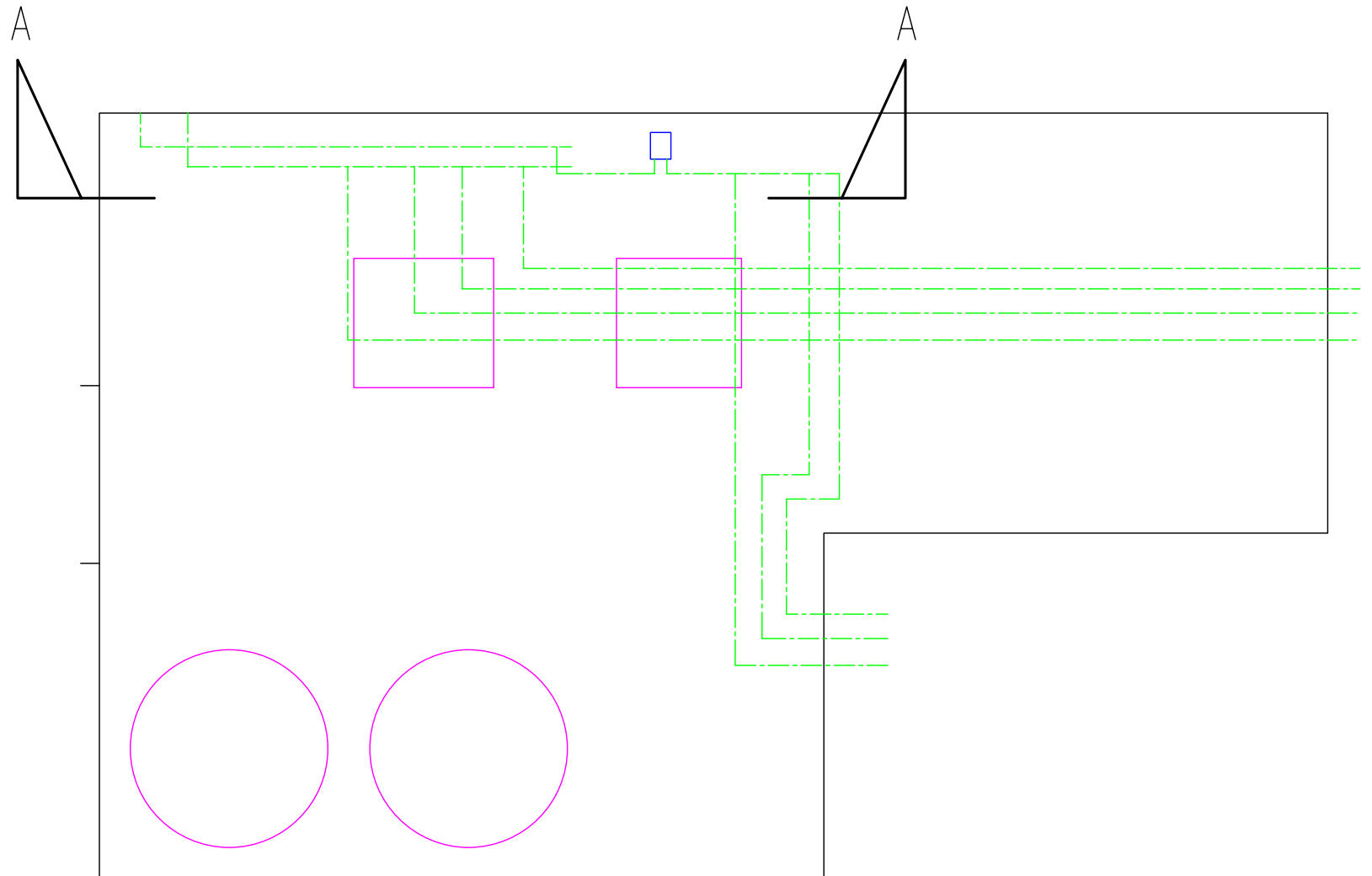
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## Step 2 INTERREG VB NWE Application Form

### A. PROJECT OVERVIEW

#### Project identification

Project title	<b>HeatNet: Transition strategies for delivering low carbon district heat</b>				
Project acronym	<b>HeatNet NWE</b>	Project Number	<b>NWE 95</b>		
Name of the Lead partner organisation in English	City of Dublin Energy Management Agency Ltd				
Project duration in months	46 months	Start date	15-Sep-2016	End date	14-Jul-2020
Programme priority	Priority Axis 2 Low carbon				
Programme priority specific objective	SO2: To facilitate the implementation of low-carbon, energy and climate protection strategies to reduce GHG emissions in NWE				
Total budget ERDF	<b>6 913 911.28</b>				
Total budget	<b>11 523 185.53</b>				

#### Project summary

Please give a short description of the project in the four languages of the Programme:  
Issue:

- Which issue/challenge will the project address?
- Where will the project address it (territory)?

Change:

- What is the current trend in the field? How much will the project change the current situation (please quantify the objective in volume or value)?

Outputs:

- Which main outputs/pilots/investments will the project produce to achieve this change?

Long term effects:

- How and where does the project plan to sustain and roll-out its main outputs/pilots/investments after the end of the project?

---

**DE**

Das HeatNet Projekt leistet einen Beitrag zur CO2 Reduzierung in NEW. Dazu werden an sechs Standorten in UK, Irland, Belgien, Frankreich und den Niederlanden Maßnahmen getestet und umgesetzt um den Anteil von Fernwärme und -kälte (FWK) aus erneuerbaren Energien (und Abwärme) bei der Versorgung von Wohn- und Gewerbegebäuden zu erhöhen. Der Anteil der FWK beträgt in Nord-, Ost- und Mitteleuropa bereits 50%, in NWE lediglich 2-7%. FWK fördert Energieeffizienz, Treibhausgasreduzierung und eine nachhaltigere Wirtschaft. Das übergeordnete Ziel ist die Einführung der 4. Generation der FWK (4FWK) in NWE. Kennzeichnend sind Niedertemperaturverteilnetze zur Minimierung der Wärmeverluste, integrierte Wärmespeicherung sowie Versorgung von Niedrigenergiehäusern. Das Konzept erfordert die Entwicklung neuer institutioneller & organisatorischer Rahmenbedingungen. 15,000t CO2 werden jährlich eingespart.

Die wichtigsten Outputs: 1. Übertragbares HeatNet-Modell für die Verwirklichung von 4FWK Netzen in NEW. Es beinhaltet technische (transnationale) sowie institutionelle & organisatorische (regionale) Aspekte; 2. Sechs Living Labs um das HeatNet-Modell robust zu machen; 3. Lokale Roadmaps zur Umsetzung neuer technischer, institutioneller & organisatorischer Maßnahmen in 8 Living Labs (neue Rollen und Verantwortlichkeiten der Handlungsträger, Richtlinien & Politik, Raumplanung, Geschäftsmodelle & Durchführbarkeit, Finanzier- und Machbarkeit, Akzeptanz, etc.); 4. Promotion und Förderung des HeatNet-Modells in NWE, um die Langzeitwirkung von HeatNet zu garantieren. Das Konsortium bringt umfassendes NWE-Knowhow zu 4DHC (Mijnwater BV, Forschung, Energieplaner) zusammen mit der Kapazität instit. & org. Barrieren abzubauen und dauerhafte Infrastruktur auf regionaler und lokaler Ebene aufzubauen. Der weitgefächerte Erfahrungsschatz der Partner erlaubt es gemeinsam das HeatNet-Modell zu entwickeln und den 6 erfolgreichen Living Labs in den Pilotstädten zu assistieren

---

**EN**

HeatNet will address the challenge of reducing CO<sub>2</sub> emissions in NWE by creating an integrated transnational NWE approach to the supply of renewable and low carbon heat (incl. waste heat) to residential and commercial buildings, developed and tested in 6 local district heating and cooling networks (DHC) in UK, Ireland, Belgium, France, and the Netherlands. In North, East and Central Europe DHC supplies up to 50% of heat demand but in NWE only 2-7%. DHC facilitates energy efficiency, less CO<sub>2</sub> emissions and a greener economy. The overall objective is to introduce and demonstrate the 4th generation DHC (4DHC) in NWE. This is a low-temperature distribution system to minimise heat loss, integrated energy storage and supply to multiple low energy buildings. The concept requires the development of new institutional and organizational frameworks. The project will result in 15,000 t CO<sub>2</sub>e saved per annum at its end. The main outputs are: 1. A transferrable HeatNet-model for the implementation of 4DHC schemes in NWE; 2. Six living labs develop, test and demonstrate through investments the HeatNet-model to make it robust; 3. Transition Roadmaps plan for roll out of new technical, institutional & organizational arrangements in 6 living labs (new roles and responsibilities of stakeholders, regulation & policies, spatial planning, business models & viability, connection to finance and markets, acceptance, etc); 4. Promotion and fostering of the HeatNet-model in NWE through Transition Roadmaps to secure wide and long term impact of HeatNet. The consortium combines emerging NWE-knowhow on 4DHC (Mijnwater BV, academic, energy planning) with the capacity in the long term to reduce institutional & organizational barriers and to deliver permanent infrastructure at local and regional level. Multiple partners expertise is diverse and needed to jointly develop and promote the HeatNet-model and assist 6 successful living labs at the investment sites

#### FR

Le projet HeatNet répond au défi de la réduction des émissions de CO<sub>2</sub> en ENO par une approche intégrée visant à fournir de la chaleur renouvelable et bas carbone (dont chaleur fatale) aux habitations/commerces. Cette approche est développée et testée grâce à 6 projets de réseaux de chaud et de froid (RCF) R-U, Irlande, Belgique, France & Pays-Bas. 50% de la demande de chaleur est assuré par les RCF en Europe Centrale, du Nord et de l'Est contre 2 à 7% en ENO. Ils permettent d'optimiser l'efficacité énergétique, réduction des émissions de CO<sub>2</sub> et économie verte. L'objectif global est d'introduire et tester la 4ème génération de RCF (4RCF) système de distribution à basse température minimisant les pertes de chaleur, système intégré de stockage de l'énergie et relié à des bâtiments basse consommation. Ce concept nécessite de nouveaux cadres institutionnels et organisationnels. À la fin du projet, 15 000 tCO<sub>2</sub>/an auront été économisées. Principales réalisations: 1. 1 modèle HeatNet reproductible en ENO pour les projets de 4RCF; 2. Six laboratoires pour tester, démontrer et consolider ce modèle (investissements); 3. 1 feuille de route pour la transition avec les nouvelles dispositions techniques, institutionnelles et organisationnelles de ces laboratoires (nouveaux rôles et responsabilités des acteurs des RCF, législations, politiques, aménagement du territoire, modèles commerciaux et viabilité, finance, marché, acceptation); 4. Valorisation et promotion du modèle HeatNet en ENO par la feuille de route pour un vaste impact sur le long terme. Le groupement combine des savoir-faire émergents sur la 4RCF en ENO (Mijnwater BV, universités, planification énergétique) avec la capacité sur le long terme de minimiser les obstacles institutionnels et organisationnels par des infrastructures permanentes au niveau local et régional. Ces expertises diverses sont nécessaires pour développer conjointement le modèle HeatNet et le promouvoir avec l'aide des 6 laboratoires pilotes.

#### NL

Binnen de transitie naar een koolstofarm energiesysteem is in NWE maatwerk nodig voor de uitrol van stadsverwarming en koeling (DHC). DHC kan in EU een marktaandeel van 30% hebben in 2030. In Noord-, Oost- en Midden-EU levert DHC tot 50% van de warmte, in NWE slechts 2 à 7%. DHC faciliteert energie-efficiëntie, minder CO<sub>2</sub> en een groenere economie. De algemene doelstelling is de introductie en demonstratie van 4e generatie DHC (4DHC) in NWE. 4DHC wordt elders getest en staat voor een CO<sub>2</sub>-arm energiesysteem dat gebruik maakt van meerdere duurzame warmtebronnen (incl. restwarmte), lagetemperatuurnetten voor minimaal warmteverlies, geïntegreerde energieopslag en compatibiliteit met energieneutrale gebouwen. Dit concept vereist wel de ontwikkeling van nieuwe institutionele en organisatorische kaders. Het project beoogt een jaarlijkse besparing van 55000 ton CO<sub>2</sub>eq. Outputs: 1. Een transfereerbaar HeatNet-model die technische (transnationale) en institutionele & organisatorische (regionale) aspecten verbindt als voorwaarde voor implementatie van 4DHC in NWE; 2. Zes living labs die het HeatNet-model testen, demonstreren en robuuster maken; 3. Investerings in 4DHC en toepassing van technische, institutionele en organisatorische maatregelen in 6 living labs (nieuwe rollen en verantwoordelijkheden van stakeholders, regelgeving, beleid, ruimtelijke ordening, lokale en regionale roadmaps, business modellen, betrokkenheid marktactoren, acceptatie...); 4. Promotie en stimuleren van toepassing van het HeatNet-model buiten de 6 living labs om de lange-termijn-impact van in NWE te verzekeren. Het consortium combineert ontluikende NWE-knowhow rond 4DHC (Minewater BV, kennispartners, etc) met de capaciteit om op lokaal en regionaal niveau tot realisatie te komen (institutionele & organisatorische barrières). De expertise van partners is divers maar nodig om samen het HeatNet-model te ontwikkelen en promoten, en om 6 succesvolle living labs te begeleiden

## Workplan overview

WP	Type	Title	Partner in charge	Total budget
WP M	management	Project management	City of Dublin Energy Management Agency Ltd (lp)	1 108 521.36
WP LT	long term effects	Long Term	City of Dublin Energy Management Agency Ltd (pp 1)	1 134 100.78
WP T2	implementation	Evaluation	Hogeschool van Amsterdam (pp 9)	532 730.63
WP T3	implementation	HeatNet Model	Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement (pp 14)	740 942.96
WP I1	investment	Plymouth Living Lab	Plymouth City Council (pp 2)	1 541 087.91
WP I2	investment	South Dublin Living Lab	South Dublin County Council (pp 13)	1 025 426.00
WP I3	investment	Aberdeen Living Lab	Aberdeen City Council (pp 11)	726 347.50
WP I4	investment	Kortrijk Living Lab	Stad Kortrijk (pp 4)	1 428 859.50
WP I5	investment	Heerlen Living Lab	Mijnwater B.V. (pp 12)	1 607 530.04
WP I6	investment	Boulogne sur Mer Living Lab	Ville de Boulogne-sur-Mer (pp 7)	1 183 645.56
WP C	communication	Communication	Energy Cities (pp 6)	493 993.29
<b>Total</b>				<b>11 523 185.53</b>

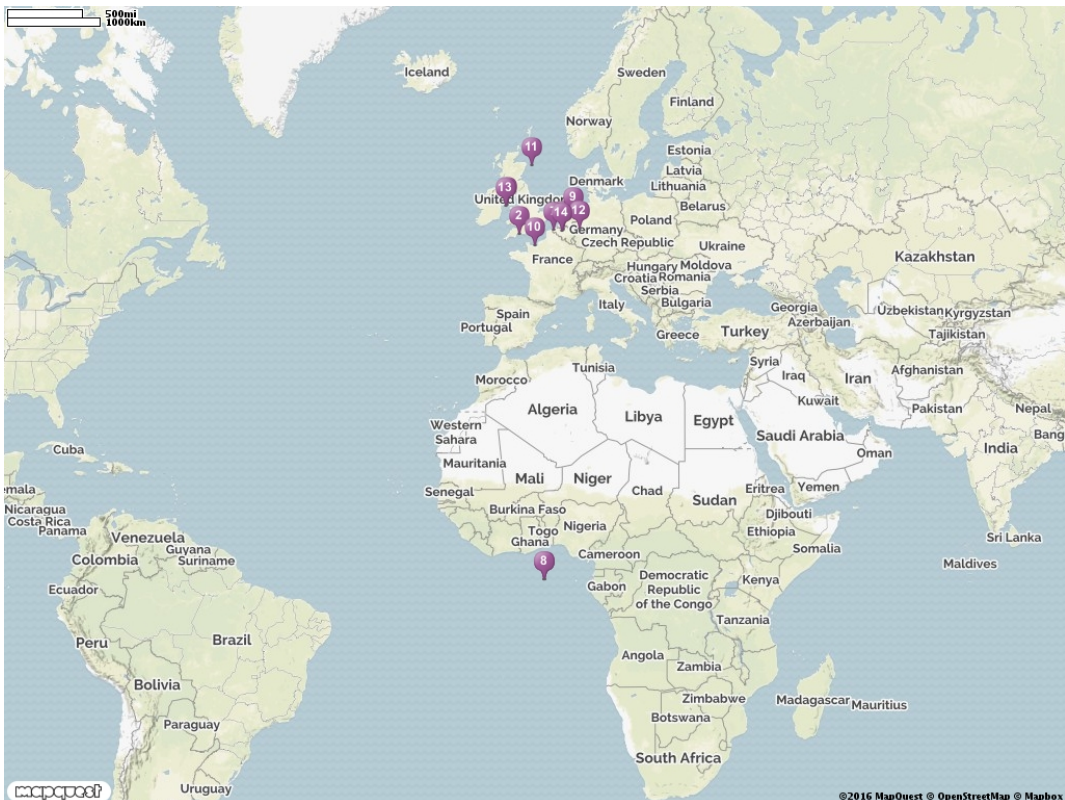
## Project partners overview (LP and PP only)

Partner nr	Name of the organisation	Abbreviation	Total ERDF budget	Total budget	Country
1	City of Dublin Energy Management Agency Ltd	Codema	690 253.51	1 150 422.52	IE
2	Plymouth City Council	PCC	1 045 401.35	1 742 335.59	UK
3	CAP 2020 asbl	CAP 2020	241 813.10	403 021.84	BE
4	Stad Kortrijk	Kortrijk	809 401.50	1 349 002.50	BE
5	Intercommunale Leiedal	Leiedal	179 850.00	299 750.00	BE
6	Energy Cities	ECN	190 009.50	316 682.50	FR
7	Ville de Boulogne-sur-Mer	BsM	846 293.76	1 410 489.60	FR
8	Universiteit Gent	UoG	210 183.00	350 305.00	BE
9	Hogeschool van Amsterdam	HvA	217 089.52	361 815.88	NL
10	Les 7 Vents	L7V	215 100.39	358 500.66	FR
11	Aberdeen City Council	ACC	608 485.50	1 014 142.50	UK
12	Mijnwater B.V.	Mijnwater	979 147.26	1 631 912.11	NL
13	South Dublin County Council	SDCC	564 643.80	941 073.00	IE
14	Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement	CER	116 239.09	193 731.83	FR
Sub-total for partners inside			6 913 911.28	11 523 185.53	
Sub-total for partners outside			0.00	0.00	
<b>Total</b>			<b>6 913 911.28</b>	<b>11 523 185.53</b>	

## Project partners and subpartners overview (LP and PP only)

Partner nr	Partner role	Name of organisation	Country	Total budget
1	LP	City of Dublin Energy Management Agency Ltd	IE	1 150 422.52
2	PP	Plymouth City Council	UK	1 742 335.59
	Subpartner 1	University of Plymouth (UoP)		50 000.00
		Percentage of partner total budget: 0.03	Total	50 000.00
3	PP	CAP 2020 asbl	BE	403 021.84
4	PP	Stad Kortrijk	BE	1 349 002.50
5	PP	Intercommunale Leiedal	BE	299 750.00
6	PP	Energy Cities	FR	316 682.50
7	PP	Ville de Boulogne-sur-Mer	FR	1 410 489.60
	Subpartner 1	Habitat du Littoral		499 893.00
		Percentage of partner total budget: 0.35	Total	499 893.00
8	PP	Universiteit Gent	BE	350 305.00
9	PP	Hogeschool van Amsterdam	NL	361 815.88
10	PP	Les 7 Vents	FR	358 500.66
11	PP	Aberdeen City Council	UK	1 014 142.50
	Subpartner 1	Aberdeen Heat and Power		44 400.00
		Percentage of partner total budget: 0.04	Total	44 400.00
12	PP	Mijnwater B.V.	NL	1 631 912.11
13	PP	South Dublin County Council	IE	941 073.00
14	PP	Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement	FR	193 731.83

## Project map



## B. PROJECT DESCRIPTION

### Relevance

#### Context and territorial analysis

- What socio-economic issue / challenge in NWE is your project addressing?
- What are the current situation and trends in the sector / field addressed by your project?
- What can be the added value of territorial cooperation in North West Europe in this sector / field?

Heating and cooling (H&C) accounts for around half of the EU's energy consumption, 84% of which is generated from fossil fuels while the share of renewables is very low. Therefore the H&C sector is key to Europe's competitiveness and supply security. In 2008 the total heat losses of the entire EU27 energy system after end use were 39.3 EJ, which is three times more heat than the total heat requirements for all domestic and commercial buildings. Through District Heating & Cooling (DHC) networks this waste heat can be utilised, fossil fuel use and greenhouse gases reduced, and sources of low carbon and renewable heat integrated.

Currently DHC is most widely used in North, Central and Eastern Europe, with market shares often greater than 50%, in comparison to the NWE average of only 5%. Many advanced countries are now moving to best-practice 4th Generation DHC (4DHC), while NWE is currently 'locked-in' to the current heating sector norms (i.e. individual fossil fuel systems) and therefore find it difficult to 'un-lock' the many socio-economic benefits of 4DHC. Integrating low-carbon heat sources is a challenge, and one of the key innovations of 4DHC systems is the ability to integrate multiple sources of heat, including co-generation, renewable and 'waste' heat (heat that is a waste resource from another process) into an overall flexible smart energy system which optimises all energy production and consumption. This enables urban areas to make better use of low-cost, low-carbon local resources, increase security of supply, lower heating costs and facilitate the transition to an overall sustainable energy system.

The conditions in NWE are no different to the rest of the EU in terms of technical feasibility for DHC: the same 4DHC technical fundamentals that are applied in Denmark and Sweden can be applied any NWE region. The challenge is the disparities in DH development which stem from differences in policy, regulation, planning, experience, knowledge, finance and economic conditions.

One of the key reasons DHC has not developed in NWE is because heat is not effectively targeted in national level policy, planning and strategies as it is inherently a local level issue, but at a local level, there are no requirements, expectations or experience to plan for heat supply. Local authorities in NWE are therefore not in a position to confidently facilitate the development/extension of DHC or include DHC policy into their energy strategies and plans due to a lack of knowledge, experience and working examples. DHC development requires a long-term vision and plan, therefore local authority involvement is key for DHC development, and this is evident from other countries with high levels of DHC and from the DH developments which have already been successful in NWE.

NWE regions have a commonality in terms of the low uptake of DHC, and this links them together and gives them a shared interest. There is no easy plug-and-play solution for integrating high levels of DHC from other regions outside NWE, as their development pathways are not comparable due to the many organisational disparities already outlined. Therefore, it is only through territorial cooperation of stakeholders from NWE regions that a custom-made NWE innovative solution be achieved, which will lead to accelerated uptake of DHC and transition to 4DHC systems in NWE.

Many already funded EU projects showcase best practice low-carbon DHC technological solutions and transition pathways of other countries with high % of DHC (Celsius, SmartReFlex, GeoDH, FLEXYNETS, EcoHeat4EU, ProgREsSHeat) but none are specifically aligned to the needs of NWE, which are not technology focussed and cannot exactly replicate the transition pathways of other countries. NWE regions need to establish transition pathways that suit their own particular situation, found through a coordinated and interdisciplinary approach to knowledge sharing, support and on-the-ground action.

### Project scope

- What will be the project's specific focus within the sector / field?
- How is the project going beyond the existing situation and / or practices in the sector / field?
- What are the main outputs / pilots / investments envisaged?

The focus of HeatNet is to overcome the financial, regulatory and organisational barriers preventing the development of DHC in NWE, and to introduce 4DHC as best practice. The partnership has identified common and barriers, but the issues and solutions are not well understood. HeatNet seeks to narrow the disparities in DHC development between NWE regions and the rest of the EU to allow the NWE heat sector take full advantage of the socio-economic benefits of DHC.

Existing practices involve individual solutions decided by individual developers based on short-term business economics, whereas a transition to 4DHC involves a holistic view of a regional integrated smart energy system based on long-term, socio-economic benefits and inclusive sustainable growth. This type of system requires significant upfront investment in infrastructure and the economics require a long-term view, both of which are difficult for public authorities and not attractive to the private sector.

HeatNet focuses on multi-stakeholder partnerships to create viable 4DHC roadmaps and effective evidence-based guidance for public authorities. The current practice is that national level policies dominate the energy sector in NWE, which means many 4DHC efficiencies and synergies which can only be identified on examination of local-level energy systems are overlooked. HeatNet is going beyond the existing situation by providing the tools needed for local authorities to implement local heat strategies with confidence, based on the expertise and on-the-ground learnings of the HeatNet partnership from pilot investments. HeatNet aims for 4DHC, the most advanced DHC systems in the EU. This puts NWE DHC systems directly on the pathway to leading the way in this sector and pioneer this best practice in the region. Creating a pathway to 4DHC now future-proofs these heating systems and gives all stakeholders the ability to interact in an advanced smart energy system. Pilots tackle the principle market failure - the cost of the grid, which competitors (eg gas) have already amortised - investing in network pipes. HeatNet, through its diverse mix of innovation stakeholders, from different types of innovation territories in NWE, including Universities (Amsterdam (NL) & Gent (BE)), public bodies (see Pilot Investments), EU networks (Energy Cities(FR)), SME networks (CAP2020(BE)), Energy Agencies (Codema (IE) 7Vents (FR)), and regional agencies (Leiedal (BE) Cerema (FR)), and associate partnership with expertise from the 4DH research centre in Denmark, aims to build upon existing knowledge and find new solutions through collaborative knowledge flows.

The main outputs of HeatNet are to develop innovative tools (HeatNet Model) and transition roadmaps (Long Term Effect) specific to the needs of the heating sector in NWE, and use exemplar pilot projects (Investments) to develop, test and re-evaluate (Evaluation) such HeatNet tools, resulting in visible and measurable results. HeatNet's exemplar pilots have been chosen as they represent diverse governance models, business strategies, investment approaches and are at different stages of development of DHC/4DHC, ranging from no progress (Dublin (IE), Kortrijk (BE)) to a system featuring many core components of 4DHC (Heerlen (NL)) and a range of intermediate stages (Boulogne s/Mer (FR), Aberdeen and Plymouth (UK)). This wide status amongst pilots is essential to understand the stages of transition and the variety of routes to 4DHC that may be followed in NWE. It is only through a transnational approach that those regions with little or no progress can learn from the leaders in NWE involved in HeatNet, as the pilots represent the status of DH development in their respective countries. Through the selection of this range of pilots, HeatNet will spread knowledge and know-how between the innovation leader and innovation follower regions within the project, & contribute to overall territorial cohesion in NWE.



## Cooperation intensity

Cooperation criteria	
Joint development (mandatory)	Partners collaborated (through face to face workshops, telecon and information exchange) to identify the common issues regarding DHC, project structure, and agreed that transnational collaboration would add value to their individual efforts to identify solutions. Pilots were jointly chosen to enhance these solutions and add to the project's objectives. These pilots have gone through pre-feasibility studies to ensure that at the initiation stage they can proceed and have the ability to incorporate some principles of 4DHC. These pre-feasibility learning parameters, along with the principles of 4DHC and stakeholder expertise will form the first iteration of the HeatNet model. This 'skeleton' model will then be evaluated by using the development phases of the pilots to refine it, in a constant feedback loop until at the end of the project a robust and definitive HeatNet model has been delivered that can be used to inform and guide other 4DHC projects in the NWE and beyond. In conjunction with this transition roadmaps will be developed for the pilot regions (and Normandy).
Joint implementation and evaluation (mandatory)	The project is structured around crosscutting themes in which all partners participate: so investments, evaluation, solutions etc are implemented jointly. The timeline is structured to allow iteration between project deliverables and pilots. Coordination is achieved through the Project Management Group (PMG) in which all partners participate and the WP leaders group. Due to the short timelines of the project it is essential to implement the pilot process immediately, based on the pre feasibility criteria for their selection. From critical path analysis it has been shown that the HeatNet model (and transition roadmaps) must be initiated at the same time, starting with the 'skeleton' HeatNet model as described which will be refined and tested through the evaluation WP to ensure that information from pilot roll out can inform the model and that the evolving refined model can then inform the pilots. Because of the deliberate selection of pilots from partners at different stages of DHC penetration and sophistication there will be a constant 'trickle down' of information that will be filtered and capture through the HeatNet model. The evaluation WP is core to this and has been specifically designed to allow pilots to both feed in and be informed by the evolving HeatNet model. A longterm strategy will be jointly implemented and rolled out with reference to the overall project communications strategy to ensure project continuity. Extensive network connections will be exploited to reach key stakeholders who have the ability to influence the roll out of 4DHC in NWE and beyond. Through the activities in the long term WP (webinars and workshops) and activities in the communication WP (conferences, printed material and online media) the results of the project will be disseminated. Particular emphasis will be placed on guides to transition roadmaps and the HeatNet model to allow stakeholders to put in place the conditions for optimum proliferation of 4DHC technologies and business cases.
Joint staffing (mandatory)	The partner staff will together work as a single team to plan and evaluate activities and create deliverables, led through the PMG and Project Manager, and coordinated thematic transnational WPs, one for each of the work packages (WP) and an overall WP leader group. The consortium makeup has been selected to allow for different areas of expertise to be brought to the project, from academia and municipality governance to technical and policy experts. Any areas that were deficient in overall knowledge have been addressed through associated partner and associated partner expertise such as the inclusion of the ICP and 4DH research centre.
Joint financing (mandatory)	The project has one single budget and all the partners have funding allocated to them from this budget according to the activities they perform in the project. The Lead Partner is responsible for administering and distributing these funds and for reporting on their use. All partners have secured match funding for their project activities. All investments have undergone a pre-feasibility process which has looked at the long term financial viability of the pilot aswell as the access to funding for the capital works phase. This will be further refined through the evaluation WP and HeatNet model WP. Regular updates at bi annual partner meetings will track the project spend and projections, particular emphasis will be placed on investment spending which will be coupled with project delivery ganntt charts and risk analysis matrix to insure results within the project schedule.
Joint communication	The project has one communication strategy, agreed and monitored by the PMG/Proj. Manager, implementation being coordinated by the single communication manager. Audiences include local stakeholders and EC policy makers, Covenant of Mayors network, etc.
Joint decision-making	All key decisions are taken at PMG, all Partners being involved and informed through this mechanism. The Project Management Plan will timetable key decision-making points. Workshops and teleconferences will augment this.
Exchange of knowledge / experience	Knowledge and experience will be exchanged through participation in transnational working groups, seminars and conferences. The Evaluation of cases also provides a mechanism for exchange of knowledge/experience. All Partners participate in this activity
Joint enabling of long-term effects	All partners will jointly develop a HeatNet model for DHC implementation, designed for transferability throughout NWE and for a targeted range of stakeholders. All partners will develop a common longterm strategy, involving networks, mentoring, promotion.

**Objective, baseline and expected result / long-term effects**

<b>Programme priority specific objective (SO)</b>
Programme priority specific objective the project will contribute to.
SO2: To facilitate the implementation of low-carbon, energy and climate protection strategies to reduce GHG emissions in NWE

<b>Project objective</b>
Please define precisely the focus of the project and what it aims to achieve (what, for whom, where)
To greatly increase the installed heating capacity of DHC networks and the provision of affordable warmth by accelerating transition to 4DHC in NWE urban areas, and so make significant new contributions to GHG emission reductions through the empowerment of provision stakeholders and the confidence of investment stakeholders. This will be achieved through increasing the favorable conditions for 4DHC (Transition roadmaps) and increased deliverability of projects (HeatNet model)

<b>Project baseline</b>
Please describe and quantify the project's baseline (current situation).
District heating provides savings of 11,000t CO2e per annum in partner areas now, compared to supply by conventional systems (eg individual gas boilers). CO2 is saved by integrating renewables and waste heat in DHC and increasing overall efficiencies through centralised heat supply. Energy sources largely renewable in some (Heerlen, Boulogne s/mer), fossil fuel in others (eg Aberdeen). Others have none (eg Dublin).

<b>Please quantify (in value and/or volume) the estimated net change on the territory</b>
<ul style="list-style-type: none"> <li><b>When the project ends</b></li> </ul>
15,000t CO2e saved pa by using DHC over conventional heat (individual boilers etc). 200,000 m2 of commercial or public sector floorspace supplied by DHC. 3,000 additional dwellings supplied by DHC as a direct result of the project removing barriers.
<ul style="list-style-type: none"> <li><b>5 years after the project ends (long-term effects)</b></li> </ul>
22,000t CO2e saved pa by using DHC over conventional heat (individual boilers etc). 380,000 m2 of commercial or public sector floorspace supplied by DHC. 15,000 dwellings supplied by DHC in partner regions.
<ul style="list-style-type: none"> <li><b>10 years after the project ends (long-term effects)</b></li> </ul>
5% average share of DH in NWE to increase to 12% by 2030 due to integration of 4DHC methods and heat sources, saving 33,000t CO2e/yr and supplying 600,000 m2 of commercial/public sector floorspace and 30,000 dwellings in partner regions alone.

<b>Project sub-objectives</b>	
Define max. 3 smaller targets which need to be hit to achieve the general objective	
<b>Title of sub-objective</b>	Please provide a short explanation of the defined sub-objectives and indicate to which work packages they will lead.
1. To transfer and replicate 4DHC solutions in other urban areas	Transition Roadmaps are a key tool to the wider and accelerated delivery of 4DHC in NWE. A Guide, a main project output, will capture lessons learned from the project to enable HeatNet experiences to be transferred and replicated in other urban areas in the territory. The guide will make recommendations for policies, institutional structures (e.g. ESCOs, Partnerships), finance etc, aiming to create a more favourable situation for 4DHC projects to be delivered according to the HeatNet Model.
2. To understand barriers and identify solutions to delivery, and understand the routes of transition to 4DHC	The evaluation process will deliver this sub-objective. It is designed to capture lessons learned from the pilot experiences and other activities and so inform the development of the two main project outputs: the Guide to the HeatNet Model and Guide to Transition Roadmaps. This will be achieved in a continuous synchronised feedback loop from pilots to the HeatNet model and transition roadmaps.
3. To develop practical guidance on how to build and finance 4DHC projects	The Guide to the HeatNet Model is a main project output. It will describe in practical terms how to build and how to finance 4DHC projects. It will include a range of tools and measures to facilitate the delivery of individual 4DHC projects. The guide will be continually informed and altered by findings of the 6 living labs.



Overview table on project outputs as defined in the work plan					
Programme output indicators	Project contribution to Programme output indicator	Main outputs			Relevance
		Nr	Title	Target	
2.01. Number of solutions facilitating the delivery of existing or emerging low carbon, energy or climate protection strategies	1.00	LT.1.1		0.00	
		T3.1.1	Guide to the HeatNet Model	1.00	
		I4.1.1		0.00	
		I5.1.1		0.00	
		I6.1.1		0.00	
2.08. Estimated annual decrease of GHG	15 000.00	T2.1.1	GHG Reduction targets and other recommendations	15 000.00	
		I1.1.1		0.00	
		I2.1.1		0.00	
		I3.1.1		0.00	

### Policy context

How does the project fit EU, national and regional strategies and policies?
<p>HeatNet will increase energy efficiency (EE), decrease emissions, and increase use of renewable energy (RE) in the heating sector, in line with EU 20-20-20 targets, EU 2030 Climate and Energy Framework (40-27-27), EU Strategy for Heating and Cooling (SWD(2016) 24 final), Directives 2009/28/CE &amp; 2012/27/UE on RE and EE.</p> <p>Ireland: HeatNet will contribute to the national target 12% RE in heating sector and 33% EE target in the Public Sector by 2020. The project will also contribute to ambitions of Irelands White Paper Transition to a Low Carbon Energy Future &amp; South Dublin Sustainable Energy Action Plan.</p> <p>HeatNet will contribute to UK's national legally binding target for carbon reduction of 80% by 2050 (UK Climate Change Act 2008). It aims to decrease emissions from buildings in line with the UK strategy 'The Future of Heating', Scottish Government's Heat Policy Statement, and Plymouth &amp; Aberdeen Development Plan policies.</p> <p>France: HeatNet will contribute to national target of 23% RE by 2020 and the 10Mt/year of renewable heat required. The laws n°80-531 of 1980, Grenelle 1&amp;2 in 2009-2010, and MAPTAM of 2014 on energy transition and green growth support the development of DH in France. Regional strategies and policies also fit the project, e.g. the Normandy wood energy plan.</p> <p>HeatNet fits with the Netherland's national Heat Vision (2015) which focuses on RE and waste heat to replace gas in heating. Regional policies also fit well with HeatNet such as "Heating is cool" collaboration between 25 parties in Amsterdam Metropolitan Area and the policy of the municipality of Heerlen to reduce 20% CO2 emissions.</p> <p>Belgium has a national target of 13% RE by 2020, Walloon area regional Air Climate 2050 strategy, and Walloon Smart Cities program, all of which HeatNet will contribute to. New DH legislation is due to be passed nationally in 2016 and obligations to connect to gas networks have recently been abolished, and so fits well with the timing of HeatNet.</p>

Which past or current EU and other projects or initiatives does the project make use of? Please describe the experiences/lessons learned the project draws on, and other available knowledge the project capitalises on.
<p>Our strategy builds on previous Interreg projects, including ENO (NWE IIIb, the Minewater Project), GREAT (NWE IVb, business models for smart grid &amp; renewables), MUSIC (NWE IVb, energy transition in urban areas), ARBOR and BIOenNW (NWE IVb, on energy from biomass), ACE (NWE IVb, smart energy cities). Also Stratego (No.IEE/13/650); EcoHeat4EU; RES H/C SPREAD. In many projects, HeatNet-partners were involved.</p> <p>In particular, HeatNet makes use of the learnings of the Heat Roadmap Europe and Stratego projects from which we learned that there is high potential for DH development in NWE regions, and DH is as technologically suitable in NWE as it is in other regions with high implementation such as Denmark, Estonia, Latvia and Lithuania. We have learned the heat demand density thresholds which make DH more or less feasible, and seen that there is a large amount of waste heat available in NWE for use in DH systems. HeatNet aims to take their outputs and experience a step further towards delivery of DH projects.</p> <p>We will connect with the Celsius project (<a href="http://www.celsiuscity.eu">www.celsiuscity.eu</a>) as a source of additional case studies.</p> <p>Many partners have developed strategies for carbon emission reductions and energy efficiency in buildings, making use of EU programmes to gain transnational and cross border expertise: Build with CaRe, MUSIC, Vital Rural Areas, North Sea Sustainable Energy Planning, Low Carbon Regions in the North Sea cluster (NSR IVb) learning the importance of integration with spatial planning; Ace, IV NWE; ECOBEE IVA Channel; BISEPS, V 2Seas; REFURB, progRESsHEAT (Horizon 2020). The main lesson learnt from these projects is that in order to make the energy transition we need to bring stakeholders together and lead them towards a common goal making use of demonstration actions, facilitated by public bodies. This in turn requires political will and a good policy and regulatory framework. Current projects to liaise with include STORM &amp; BISEPS.</p>

**Horizontal principles**

<b>Please indicate which contribution to horizontal principles the project applies, and justify the choice</b>		
Horizontal principles	Type	Description
Sustainable development (environment)	positive	The project has a strong and central sustainable development focus. Environment: introducing new ways to reduce carbon emissions. Social: aiming to deliver affordable warmth to those on low incomes. Economic: unlocking barriers to growth in this sector. Development of 4DHC networks will allow much greater use of low carbon and renewable energy to heat buildings.
Equal opportunity and non-discrimination	positive	The project only indirectly has an impact on equality and non-discrimination, albeit a positive one. Delivery of affordable heat to social housing will help to reduce living costs for groups in society who are excluded or at risk of exclusion through economic deprivation.
Equality between men and women	neutral	The project is neutral in this respect, considering its objectives and outputs. However, in its delivery all PPs have equal opportunity policies, and the representatives engaged in the partnership are evenly mixed in relation to gender.
Inclusion	positive	The project will have a positive impact on Inclusion, through its objective of providing affordable warmth for groups excluded or at risk of exclusion from society through economic deprivation.

## Project risk

Please note that the definition of 3 risks only (not more) is compulsory.

Risk 1		
Title	Start month	End month
Project fails to engage target groups (and so result is affected)	Sep-2016	Jan-2020
<b>Description</b>		
The project partners on their own cannot achieve the long term result. This requires the engagement of others. We have identified municipalities, housing associations, and energy companies as the main actors able to effect a step change in delivery of district heating networks and affordable heat in NWE. If we fail to engage these actors, beyond the confines of the partnership, we will fail to achieve the result.		
<b>Likelihood that the risk will occur:</b>		<b>Impact of the risk on delivery:</b>
likely		high
<b>What is foreseen to mitigate the risk?</b>		
HeatNet's long term effect WP employs 3 approaches to mitigate this risk: 1. Place-based strategies are needed to create more favourable conditions for the delivery of District heat networks, and especially 4DHC networks according to the HeatNet Model. Our Guide to making Transition Roadmaps will provide a framework and set of tools to enable Transition Roadmaps to be prepared for other urban areas and so put in place the conditions for successful HeatNet Model (4DHC) projects. 2. Access to finance is a common barrier to delivery of DHC. Often the problem lies in a poor risk profile – project plans containing uncertainties that deter investors (who do not understand the technical details or appreciate the benefits for sustainable development). HeatNet will work with the Investor Confidence Project to develop standards for 4DHC project design. ICP aims to standardise and quality-assure project documentation (technical design, financial modelling etc) to provide greater assurance to investors and so reduce transaction costs and make finance cheaper. This will open up new sources of finance for 4DHC. 3. We plan to hold events and disseminate outputs from the project to these groups, and to establish a longterm programme of Peer to Peer mentoring involving both public and private sectors throughout NWE, run by Energy Cities and others. We will also engage with identified networks of stakeholders during the projects lifetime to disseminate the results through our communications strategy.		

Risk 2		
Title	Start month	End month
Partnership fails to deliver outputs in a transnational way	Sep-2016	Jan-2020
<b>Description</b>		
Interreg NWE programme aims to deliver transnational solutions as a requirement of the programme. The HeatNet partnership has identified that barriers to delivery of district heating is a transnational problem requiring a transnational solution. It is vital therefore that we do not lose the vision of transnational working. The risk of doing so would be to deliver local solutions to local problems, which cannot be replicated and transferred. This would be another factor which would prevent HeatNet from achieving our stated result.		
<b>Likelihood that the risk will occur:</b>		<b>Impact of the risk on delivery:</b>
not likely		high
<b>What is foreseen to mitigate the risk?</b>		
We have built a number of mechanisms into our project to ensure that our work remains transnational. Pilots have been chosen specifically that will add knowledge to the HeatNet model and transition guide. At the start of the project we will agree common principles for 4DHC. We already have the basis for this, developed by the Associate Partner 4DH Research Centre, Aalborg. These principles will form the basis for the 'skeleton' HeatNet model all investments, as a common, transnational framework. Within the partnership we have considerable expertise and have created the 4DHC Team, comprising HvA, UoG, Cerema, CAP2020 and Codema, to advise investments as they are developed and implemented in conjunction with the HeatNet model and Roadmaps.. We have also created mentoring relationships between PPs undertaking pilot investments which adds a further transnational dimension to implementation. We have created a whole WP which aims to extract the transnational learning from the pilot investments and other activities, and to turn that into outputs that benefit fully from transnational added value and so are widely transferable and replicable in the long term. All partners will be involved so that we gain the full benefit of the knowledge and experience invested within the partnership.		

<b>Risk 3</b>		
<b>Title</b>	<b>Start month</b>	<b>End month</b>
Investments not delivered on time (and within project frame of reference)	Sep-2016	Jan-2020
<b>Description</b>		
<p>The pilot investments are central to the project, as living labs where barriers to implementation of the 4DHC approach, the HeatNet Model, can be fully explored, understood and resolved. Hence it is essential that the pilots deliver their planned outputs within the life of the project. Implementation of investments carry many risks, such as: Partnership risks: Most of the investments are to be delivered by organisations working together. Partnerships may fail, through poor communication, conflicting objectives, etc. Regulatory risks: Most investments require one or more development permits in order to proceed. Construction risks: unforeseen problems can arise during construction, for example regarding underground obstructions to pipeline routes, technical problems, poor performance of contractors etc. All risks can increase costs and slow the pace of delivery.</p>		
<b>Likelihood that the risk will occur:</b>		<b>Impact of the risk on delivery:</b>
likely		high
<b>What is foreseen to mitigate the risk?</b>		
<p>We expect to encounter problems with the investments – that is normal given their nature – but we see problems as valuable learning experiences as well as management challenges to be resolved. The underlying theme of HeatNet is to understand barriers to implementation so that they can be removed. The Evaluation process, having a cyclical approach, is designed to analyse problems as they arise in one place and to feed learning back to all partners so that they can be avoided elsewhere. Nevertheless, we recognise that these risks must be avoided or resolved in order to deliver the project successfully. To help to do this we have created a common structure for investment delivery (Feasibility; Design; Implementation) allowing risks to be considered and mitigated in a logical order. The investment PPs will be supported by expertise from across the partnership (the 4DHC Team and mentor PPs), which will help to both spot problems in advance so that they can be avoided and to help find solutions. The Project Management Group, work package leader group and Lead Partner will monitor investments closely, requiring regular progress reporting from pilot investment partners to ensure delivery within the 40 month activity period of the project (remaining months are for project closure).</p>		

## Target Groups

Target group	Description	Target value
local public authority	NWE Municipalities in highly urbanised areas where there is potential for development of district heating	0.00
regional public authority	All regional authorities in NWE with strategic planning functions concerning urban development and energy planning.	0.00
national public authority	All national authorities in NWE with strategic planning functions concerning urban development and energy planning.	0.00
sectoral agency	Social housing providers	0.00
infrastructure and (public) service provider	Those concerned with delivery of the built environment (housing, commercial office and industrial space, enabling infrastructure)	0.00
enterprise, excluding SME	Energy companies operating in NWE	0.00
SME	Those active in the heating, renewable and low carbon energy, and building energy efficiency sectors	0.00
General public	Heat consumers, especially residents of blocks of apartments	0.00
education/training centre and school	training centres for engineers, planners, architects	0.00
business support organisation	Networks and clusters of SMEs active in the heating, renewable and low carbon energy, and building energy efficiency sectors	0.00
higher education and research		0.00

WP nr	Title	Start month	End month	Budget
WP LT	Long Term	Sep-2016	Jan-2020	1 134 100.78

## Partners involvement

Partner responsible	City of Dublin Energy Management Agency Ltd
Partners involved	City of Dublin Energy Management Agency Ltd, Codema. Role: LP
	Plymouth City Council, PCC. Role: PP
	CAP 2020, CAP 2020. Role: PP
	City of Kortrijk, Kortrijk. Role: PP
	Intermunicipal Association Leiedal , Leiedal. Role: PP
	Energy Cities, ECN. Role: PP
	City of Boulogne-sur-Mer, BsM. Role: PP
	University of Gent, UoG. Role: PP
	Amsterdam University of Applied Sciences, HvA. Role: PP
	7 Vents, L7V. Role: PP
	Aberdeen City Council, ACC. Role: PP
	Mijnwater B.V., Mijnwater . Role: PP
	South Dublin County Council, SDCC. Role: PP
Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning, CER. Role: PP	

## Implementation summary

Summary and objective of the work package including an explanation of how partners will be involved (who will do what). Note: Please elaborate if this work package will contribute to a project sub-objective and if so to which.

Objective: To transfer and replicate 4DHC solutions in other urban areas through a transition guide beyond the term of the project. Lead: Codema. Transition Roadmaps will analyse heat demand and potential heat sources spatially, at city-scale, identifying opportunities for 4DHC nodes - places where networks can be developed through individual projects using the HeatNet Model. Viability will be tested from a 4DHC perspective and considering social benefit, so identifying opportunities not seen previously. Actions will be identified to turn these opportunities into projects to use the model and so initiate and extend 4DHC at city-scale, including: spatial policies, partnerships, financial instruments, pricing strategies, smart grid integration, renewable energy sources, and setting city-wide targets for CO2 emissions, number of dwellings, and area of floor space served by DHC. Each pilot will lead the development of their Transition Roadmap, tailored to local conditions, taking a 15-20yr view. Roles:- Codema, Cerema, HvA: support for heat demand & waste heat mapping, city-scale, incorporating realistic scenarios to accommodate uncertainty and future technological & strategic policy development. Mijnwater BV & UoG: technical systems advice; Lieidal & 7Vents: support Roadmap action planning and policy/partnership measures; CAP2020 & Cerema: business model advice, pricing. The rollout strategy comprises three ACTIVE elements plus guides & tools, so ensuring durability. 1. The Procurement Guide for 4DHC project expertise is a dynamic mechanism requiring active use. 2. ICP 4DHC Protocols will be promoted in an active investment market. 3. HeatNet guides & business cases will be promoted through a range of events being part of the Energy Cities and CAP2020 networks, including seminars & training. NWE Cities with high potential for DHC (identified from Heat Roadmap Europe, Celsius project, etc) will be engaged. Aalborg 4DH Centre will provide strategic advice and critique.

## Target groups

Target groups	<ul style="list-style-type: none"> <li>• local public authority</li> <li>• regional public authority</li> <li>• national public authority</li> <li>• sectoral agency</li> <li>• infrastructure and (public) service provider</li> <li>• enterprise, excluding SME</li> <li>• SME</li> <li>• General public</li> </ul>
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How will you involve target groups (and other stakeholders) in the development of the work package main outputs?

Public authorities have the powers to facilitate infrastructure delivery and can coordinate stakeholders. They include municipalities, housing providers and other public bodies having a large building stock. They will be involved in the pilot investments enabling an understanding of their needs and motivations. Energy companies include not only those operating DH networks, but also traditional energy companies which may be interested in new business models for energy supply. They have the ability to secure investment and to make the operational changes needed for Transition. Examples of these are involved directly in the project at pilot level. Consumers can demand change, if they are empowered through information. Business Cases targeting each group will promote benefits of 4DHC via networks, web, conferences, peer to peer training/mentoring/twinning. Transition Roadmap Guide will bring together frameworks, tools and measures to support roll out of HeatNet Model through project

## Activities

Please describe activities and deliverables within the work package				
Activity nr	Title		Start month	End month
Activity 1	Transition Roadmaps		Sep-2016	Jan-2020
Pilots regions will develop their Transition Roadmap, facilitated through the evaluation feedback and through transnational support from expert partners. Experiences will be captured in a Guide to enable replication. Roadmaps will reflect local contexts (energy sources, development opportunities, stakeholders, current DHC status, policy regime, finance) and identify key opportunities for 4DHC development, for grid integration and capturing of waste heat, propose governance & financing mechanisms				
	Deliverable nr	Title	Target value	End month
	Deliverable 1.1	Policy, legal and regulatory review. Lead: Energy Cities, with Aberdeen, BsM, Leiedal, Kortrijk, S. Dublin, HvA, CAP2020	1.00	Nov-2017
Report, reviewing policy measures (all scales), good practices, barriers and solutions. To include: spatial & low carbon policy; impact of national measures (Energy Performance of Buildings Directive); Energy Markets. Recommendations and actions.				
	Deliverable 1.2	Spatial policy for 4DHC. Lead: HvA, with Plymouth, BsM, Kortrijk, S. Dublin, Cerema, 7Vents, Leiedal	1.00	Jul-2019
Based on Regulatory review and pilot experiences, this will be toolkit of spatial policy approaches to securing DHC through new development. HvA, Leiedal, Kortrijk, Plymouth, Aberdeen, Mijnwater BV, Boulogne s/Mer, S.Dublin.				
	Deliverable 1.3	Set of 7 transition Roadmaps, for Dublin, Aberdeen, Plymouth, Boulogne sur Mer, Normandy, Kortrijk, Heerlen. Lead: Leiedal	7.00	Mar-2019
6 Pilot areas + Normandy will produce individual transition Roadmaps, being action plans to support further development of DHC networks (using HeatNet Model) and transition to 4DHC. Include: policy recommendations; pipeline of projects.				
	Deliverable 1.4	Main output: 4DHC Transition Guide. Lead: Codema, with 7Vents, Leiedal, HvA, Mijnwater, Plymouth, Cerema, UoG	1.00	Dec-2019
The Guide will detail how to make Transition Roadmaps, having sections on the key elements of 4DHC and practical guidance on how to implement them, and to integrate them in a smart energy grid. Recommended policy, procurement & other transition measures.				
Activity 2	Business cases for 4DHC		Apr-2017	Oct-2018
Compelling business cases will be made to three target groups; the energy sector; public authorities; and consumers. All are key actors to long term dissemination. Their inexperience of DHC is a significant barrier. The business cases aim to secure greater commitment to implementing DHC, by presenting benefits clearly, and defining the role each has to play in implementing Transition Roadmaps and how this can be facilitated. They will be presented through targeted events, seminars, e-news etc				
	Deliverable nr	Title	Target value	End month
	Deliverable 2.1	Business Case to Energy sector. Lead: CAP2020, with Aberdeen, Codema, UoG, Energy Cities	1.00	Oct-2018
Setting out the potentials and benefits of 4DHC for Energy Companies from a commercial perspective. Scope out alternative business models and governance arrangements (Public/Private partnerships), and finance arrangements. Importance of affordable warmth				
	Deliverable 2.2	Business Case to public sector. Lead: Codema, with 7Vents, Plymouth, BsM, Mijnwater, S.Dublin, Kortrijk, CAP2020, Energy Cities	1.00	Oct-2018
Setting out the potential contribution of DH (with emphasis on 4DHC) for meeting carbon emission targets and addressing fuel poverty/affordable warmth. Outlining alternative business models and sources of finance. Signposting to resources.				
	Deliverable 2.3	Case to energy consumers. Lead: 7Vents, with BsM, Aberdeen, Leiedal, S. Dublin	1.00	Oct-2018
Setting out the benefits of 4DHC to consumers (Ease of use, environmental; ability to generate and sell energy as prosumers). Introducing community based collaborative governance and finance models. Signposting to resources.				
Activity 3	Promoting 4DHC to key stakeholders to ensure long term dissemination beyond the life of the project.		Sep-2016	Jan-2020
Transition to 4DHC requires action from both the public and private sector. A roll out strategy aims to galvanise key actors, introducing HeatNet Model and Transition Roadmap Guide. Events and training materials will develop institutional capacity, facilitate knowledge transfer and collaboration. The Transition Roadmap Guide will include policy recommendations (from Regulatory Review). Development of local/regional Roadmaps is a key mechanism for improving policy.				
	Deliverable nr	Title	Target value	End month
	Deliverable 3.1	Roll out strategy. Lead: Codema, with all PPs	1.00	Nov-2018

	An action plan for key actors within NWE aiming to maximise the replication of the HeatNet model and Transition Roadmaps and influence National policy. It will be delivered with reference to the communications strategy.		
	Deliverable 3.2	SME capacity building. Lead: CAP2020, with Energy Cities	6.00   Jan-2020
	Workshops & webinars, in each MS, providing information (Intro to transition guide & HeatNet tool) and opportunities to share experience and knowledge. Enable SMEs to explore and understand opportunities to supply the 4DHC sector, so supporting transition		
	Deliverable 3.3	Capacity building workshops for public authorities. Lead: Energy Cities, with CAP2020, Codema, Cerema, HVA, UoG	9.00   Jan-2020
	Peer to Peer networking events/webinars – sharing knowledge and expertise. Using Non-tech Guide to 4DHC and promoting HeatNet Model & Transition Roadmap Guide. Study tours of pilot sites. Training trainers workshop.		



WP nr	Title	Start month	End month	Budget
WP C	Communication	Sep-2016	Jan-2020	493 993.29

## Partners involvement

Partner responsible	Energy Cities
Partners involved	City of Dublin Energy Management Agency Ltd, Codema. Role: LP
	Plymouth City Council, PCC. Role: PP
	CAP 2020, CAP 2020. Role: PP
	City of Kortrijk, Kortrijk. Role: PP
	Intermunicipal Association Leiedal , Leiedal. Role: PP
	Energy Cities, ECN. Role: PP
	City of Boulogne-sur-Mer, BsM. Role: PP
	University of Gent, UoG. Role: PP
	Amsterdam University of Applied Sciences, HvA. Role: PP
	7 Vents, L7V. Role: PP
	Aberdeen City Council, ACC. Role: PP
	Mijnwater B.V., Mijnwater . Role: PP
	South Dublin County Council, SDCC. Role: PP
	Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning, CER. Role: PP

## Implementation summary

Summary description and objective of the work package, including an explanation of how partners will be involved (who will do what)
<p>Objectives: This WP aims to increase the impact of the project through the wide dissemination of the project objectives, activities, outputs and results to the 3 different target groups (energy supply sector, public sector and energy consumers) in NWE and Europe. This WP is in essence inter-connected with all other WPs.</p> <p>Summary of activities:</p> <p>Large parts of dissemination to the target groups already take place in WP long term effect in particular through the promotion activities on 4DHC. HeatNet will also communicate the results further and beyond the core target groups and Interreg NWE by establishing and disseminating several tools and further events:</p> <ol style="list-style-type: none"> <li>1: Joint development and monitoring of the communication strategy of the project, at European and national level (targeting EU and national authorities, Public Authorities (PAs) and DHC stakeholder organisations) and at local level (targeting the supply and consumer sector). Complying with the Interreg NWE programme communication strategy</li> <li>2: Preparation of tailor-made digital promotional activities such as webinars for NWE and PAs and dissemination to the main target groups via local and the Interreg NWE websites</li> <li>3: Dissemination of outputs and results to NWE and PAs via publications</li> <li>4: Presentations at national and European level events and organisation of a final conference.</li> </ol> <p>Partners' role:</p> <p>Energy Cities: coordination of communication activities, specific dissemination to PAs at NWE and European level, organisation of the final conference in Brussels</p> <p>Pilot partners: preparation of a local communication strategy to contribute to the project's communication strategy, development of communication materials for the demand and supply sides</p> <p>All partners: dissemination of the project outputs and results via its communication channels (including social media) at national/European level via presentations at workshops and conferences</p>

**Objectives**

Project sub-objectives	Types of communication objectives - What can communications do to reach a project sub-objective?	Communication objectives
To transfer and replicate 4DHC solutions in other urban areas	Raise awareness	Make policy makers, public authorities, energy companies, and energy consumers aware of the benefits of 4DHC and the strategic actions that can be taken to enable 4DHC projects using Guides, communications and events
	Influence attitude	Encourage public authorities and energy companies to implement 4DHC projects, making use of HeatNet tools (Transition Roadmap Guide and HeatNet Model Guide)
To understand barriers and identify solutions to delivery, and understand the routes of transition to 4DHC		
To develop practical guidance on how to build and finance 4DHC projects	Raise awareness	Make public authorities, energy companies, and energy consumers aware of the benefits of 4DHC and the tools available to help build and finance 4DHC projects through guides, communications and events
	Influence attitude	Encourage public authorities and energy companies to implement 4DHC projects, making use of HeatNet tools in the HeatNet Model Guide

## Activities

Please describe activities (max. 4) and deliverables within the work package				
Activity nr	Title		Start month	End month
Activity 1	Start-up activities including communication strategy		Sep-2016	Jan-2017
The first activity is to develop a communication strategy at European, national and local level that will be monitored throughout the duration of the project. To ensure that the communication strategy is shared amongst all the partners and that the Interreg NWE brand is respected, workshops will be set up between the project communication manager and all the different partners.				
	Deliverable nr	Title	Target value	End month
	Deliverable 1.1	Communication strategy	1.00	Jan-2017
A communication strategy, including European, national and local strategies, will be delivered within the first 4 months of the project including the definition of aims and methods that will be used to communicate to target groups. References long term WP				
	Deliverable 1.2	Dissemination feedback loop	1.00	Jan-2017
A "Bulletin Board" (on google calendar) showing all communication deliverables will be created to allow WP leader to monitor the progress of the communication plan (articles, publications, etc.) and to give feedback to the project partners.				
	Deliverable 1.3	Communication webinar with communication expert and all project partners	1.00	Jan-2017
A webinar will be organised allowing the communication strategy to be shared and final adjustments with all project partners.				
Activity 2	Digital activities		Sep-2016	Jan-2020
Digital activities include communication and dissemination of project activities, outputs and results to the target groups (supply and consumer sector, public authorities, DHC organisations and system providers) not only from NWE but whole Europe.				
	Deliverable nr	Title	Target value	End month
	Deliverable 2.1	Maintenance and content development of all webpages	1.00	Jan-2020
Regular update of general webpages and creation of social network accounts promoting HeatNet project work progress, on partners' websites and on the Interreg NWE website. It will be done on average twice a year.				
	Deliverable 2.2	Webinars to promote HeatNet	9.00	Jan-2020
9 webinars (20 participants expected on average) to promote HeatNet from 2018 onwards, dealing with 3 specific topics and organised in the 3 national languages (en, fr and nl). Webinars will involve one or two pilots focussed on national audiences.				
Activity 3	Publication(s)		Sep-2016	Jan-2020
Publications aim to disseminate the project outputs and results to NWE and European Public authorities, energy companies and consumers and to ensure the long term success of the project outputs				
	Deliverable nr	Title	Target value	End month
	Deliverable 3.1	HeatNet results and publication flyer	1.00	Oct-2019
The flyer (2 000 copies) will summarise the project outcomes. Easily distributed at events it will direct readers to the specific HeatNet websites where all HeatNet findings can be found.				
	Deliverable 3.2	Publications in magazines	10.00	Jan-2020
Over the project duration each project partner will be responsible for publishing at least one article in a specialised magazine or academic journal in the different NWE countries.				
Activity 4	Public Event(s)		Sep-2016	Jan-2020
Throughout the duration of the project all partners will share the project's progress and outputs with the different target groups in the frame of national and European workshops and conferences. Importantly, a final conference will be organised at the end of the project in a suitable location.				
	Deliverable nr	Title	Target value	End month
	Deliverable 4.1	Presentations during existing workshops and conferences	10.00	Jun-2019
HeatNet will be presented by all partners during European conferences/workshops (such as Open Days, EUSEW, CogenEurope or EuroHeat and Power events, national events, etc.). Each partner should at least give one presentation.				
	Deliverable 4.2	Participants and conclusions of the final HeatNet conference in Brussels	1.00	Jan-2020
A final conference will be organised in a suitable location to disseminate results, at the same time as a major European event. Stakeholders from all target groups will be involved in the European HeatNet roll-out campaign.				

## Work packages

WP nr	Title	Start month	End month	Budget
WP M	Project management	Sep-2016	Jul-2020	1 108 521.36

## Partners involvement

Partner responsible	City of Dublin Energy Management Agency Ltd
Partners involved	City of Dublin Energy Management Agency Ltd, Codema. Role: LP
	Plymouth City Council, PCC. Role: PP
	CAP 2020, CAP 2020. Role: PP
	City of Kortrijk, Kortrijk. Role: PP
	Intermunicipal Association Leiedal , Leiedal. Role: PP
	Energy Cities, ECN. Role: PP
	City of Boulogne-sur-Mer, BsM. Role: PP
	University of Gent, UoG. Role: PP
	Amsterdam University of Applied Sciences, HvA. Role: PP
	7 Vents, L7V. Role: PP
	Aberdeen City Council, ACC. Role: PP
	Mijnwater B.V., Mijnwater . Role: PP
	South Dublin County Council, SDCC. Role: PP
Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning, CER. Role: PP	

## Implementation summary

**Describe how the management on the strategic and operational level will be carried out in the project, specifically:**

- structure, responsibilities and procedures for the day-to-day management and co-ordination
- communication within the partnership
- reporting and evaluation procedures
- risk and quality management
- indicate whether the management is foreseen to be externalised

Codema is LP and will apply its extensive experience in managing European projects to ensure delivery of a high quality project on time, to scope and within budget. Project Management will not be externalised. The PMG comprises all partners and is led by the LP ( Project Manager, Project Co-ordinator, Finance Manager and Communications Manager). The LP will be responsible for the day-to-day running and delivery of the project. A Steering Group (SG), made up of members of the LP and WP co-ordinators, will guide the direction of the project and prepare for Project Management Group (PMG) and WP leader meetings, helping to manage this large partnership. A dedicated Communications Manager will be responsible for internal communications and will support the Communication WP leader. The LP will promote a strong working relationship with partners and regular communications via phone, on-line conferencing and at partner meetings. The LP will be responsible for the communication with the Joint Secretariat (JS) and will be the formal point of contact for the project. The Project and Finance Managers will ensure timely reporting on project progress and financial management and will closely monitor the project's activities and budget-spend. Compliance with national and EU regulations will be ensured with the nomination of an independent first level controller (FLC). A Project Management (PM) plan will provide overall guidance to the PMG regarding their responsibilities, internal communication and procedures for financial requirements, quality control and risk management. The partnership agreement will be finalised and signed no later than 2 months after project approval, ensuring that all partners (PPs) are signed up to their specific responsibilities. The SG will be responsible for monitoring risks (existing and new ones) and quality control (ensuring publicity requirements & high standards for project outputs are met). The SG can meet at least twice a year.

## Activities

Please describe activities (max. 4) and deliverables within the work package				
Activity nr	Title		Start month	End month
Activity 1	Day to day Project management		Sep-2016	Jul-2020
A dedicated in-house project management (LP) team will be responsible for managing the project on a day-to-day basis. The LP team will meet weekly to discuss and monitor progress. A project management (PM) plan will support joint implementation of the project's activities. The PM plan will establish roles of PM team, SG and PPs and provide a schedule for all partner & SG meetings, conference calls and deadlines for periodic reporting.				
	Deliverable nr	Title	Target value	End month
	Deliverable 1.1	Project Management Plan and meetings	6.00	Jul-2020
	The PM plan will assign responsibilities, deadlines, procedures for internal communication, monitoring, financial & quality control. The plan will support transnational co-operation and complement the Application Form (AF) and partnership agreement.			
	Deliverable 1.2	Internal communication	1.00	Jul-2020
	A strategy, promoting communication among partners and integrated into the Communication Plan. Regular communication via email, telephone and on-line conferencing. Cloud file-sharing system to track progress & and provide project communication templates.			
	Deliverable 1.3	Activity reporting	6.00	Jul-2020
	The LP will ensure the timely delivery of partner progress reports and collaborative project reports via the eMS twice a year. Informal reporting with JS will also occur with updates on progress, events, press releases and change of risk status.			
Activity 2	Financial management		Sep-2016	Jul-2020
The LP will ensure the timely preparation of certified financial claims and submission via the eMS twice a year. All PPs will nominate a qualified independent FLC who will certify partner compliance with procurement and expenditure rules.				
	Deliverable nr	Title	Target value	End month
	Deliverable 2.1	Financial reports	6.00	Jul-2020
	The LP will deliver to the Managing Authority twice yearly financial payment claim reports, audited in accordance with programme rules. Payments will be disbursed to partners in a timely fashion.			
Activity 3	Risk and quality management		Sep-2016	Jul-2020
A Steering Group, comprising of the PM team and WP coordinators, will monitor project activities, provide oversight and strategic guidance. The SC will meet virtually twice a year and communicate regularly through phone, email and on-line meetings. Emergency meetings will be held if delays and new risks are foreseen. Where corrective action is required, the JS will be informed immediately and a Request for Change initiated if necessary.				
	Deliverable nr	Title	Target value	End month
	Deliverable 3.1	Quality control	1.00	Jul-2020
	The PM plan will outline control procedures (branding, templates, coding, legal requirements etc.) for project documentation. All PPs will have responsibility for quality control for their own activities which will be overseen by the LP and the SG.			
	Deliverable 3.2	Risk Management Plan (RMP): development and implementation	1.00	Jul-2020
	The SG is responsible for Risk Management, keeping track of identified risks through the RMP (month 3). Corrective action will be agreed by the project and discussed with the JS. Risks are analysed in terms of their impact and likelihood			

WP Nr	Type	Title	Start month	End month	Budget
WP. T2	implementation	Evaluation	Sep-2016	Oct-2019	532 730.63

### Partners involvement

Partner responsible	Amsterdam University of Applied Sciences
Partners involved	City of Dublin Energy Management Agency Ltd, Codema. Role: LP
	Plymouth City Council, PCC. Role: PP
	CAP 2020, CAP 2020. Role: PP
	City of Kortrijk, Kortrijk. Role: PP
	Intermunicipal Association Leiedal , Leiedal. Role: PP
	Energy Cities, ECN. Role: PP
	City of Boulogne-sur-Mer, BsM. Role: PP
	University of Gent, UoG. Role: PP
	Amsterdam University of Applied Sciences, HvA. Role: PP
	7 Vents, L7V. Role: PP
	Aberdeen City Council, ACC. Role: PP
	Mijnwater B.V., Mijnwater . Role: PP
	South Dublin County Council, SDCC. Role: PP
	Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning, CER. Role: PP

### Implementation summary

Summary and objective of the work package including an explanation of how partners will be involved (who will do what). Note: Please elaborate if this work package will contribute to a project sub-objective and if so to which.
<p>To understand barriers and identify solutions to delivery, and understand the routes of transition to 4DHC. Lead: HvA.</p> <p>Sub-objective 2</p> <p>Action Research is an evaluation process that provides positive feedback during the test phase of pilots, allowing transnational learning to inform the evolution of pilots as they progress. The pilots learning process will be facilitated by the development of the HeatNet model through the evaluation process. Pilots are at different stages of transition to 4DHC. This will provide valuable initial and ongoing insights into the transition journey and the critical barriers. Thus at each stage all pilots are evaluated and recommendations are made to individual pilots and the HeatNet model. A first 'skeleton' of the HeatNet model will be built in the first year based on both pre- feasibility findings that led to pilot selection and on 4DHC best practice criteria. Key performance indicators (KPIs) will be identified to provide a common framework for analysis. Indeed the transnational partnership has already identified their broad categories: Current Situation, Environment &amp; technical, Financial &amp; business, legal &amp; regulatory, Governance &amp; process. The evaluation process will be led by HvA, with Cerema &amp; UoG, being knowledge partners. However, all partners will be engaged for data gathering and connecting to the stakeholders of the pilots. Evaluation workshops will take place at the half yearly partner meeting, and will be supported by case study descriptions of pilots, stakeholder interviews and site visits. We identified the following global evaluation steps in the Plan-Do-Check-Act cycle we will follow:</p> <p>Plan: Evaluation plan containing pilots KPIs and case study set up. Do: Evaluate KPIs, implement first recommendations and provide input for WP HeatNet model. Check: Evaluate results of implementation. Act: Recommendations for WP HeatNet Model and WP Transition Roadmaps</p>

### Main outputs

Please describe the project main outputs that will be delivered based on the activities carried out in this investment. For each project main output a programme output indicator should be chosen. Please note that they need to have the same measurement unit.				
Project main output	Describe the project main output and its contribution to project sub-objectives	Quantify the contribution	Delivery month	Programme output indicator to which the project main output will contribute. Please check the Programme Manual for the obligatory output indicators.
GHG Reduction targets and other recommendations	The evaluation report will capture lessons learned from the pilot investments & other activities in the project, making recommendations with regard to the HeatNet Model and Transition Roadmaps, and proposing targets for GHG reduction based on expected replication in NWE. The Report will be augmented by case studies, evaluated within the transnational KPI framework. The Report will describe the cyclical evaluation process, and its impact on pilot investments.	15 000.00	Jan-2020	2.08. Estimated annual decrease of GHG

### Target groups

Who will use the main outputs?	<ul style="list-style-type: none"> <li>• local public authority</li> <li>• sectoral agency</li> <li>• infrastructure and (public) service provider</li> <li>• education/training centre and school</li> <li>• enterprise, excluding SME</li> <li>• SME</li> <li>• business support organisation</li> </ul>
How will target groups be involved in the development of the project main outputs?	
<p>The evaluation is primarily an internal process and the principal target groups are the project partners themselves and local stakeholders. However the main lessons learned are of value for others and will be distributed via other WPs. Each partner will undertake a stakeholder analysis to enable key actors to be selected for interview, to inform case study production and general evaluation against the KPIs. The iterative process will result in periodic feedback to all pilot project stakeholders and their engagement in revision of pilot implementation. Some case studies will be selected outside the partnership where these offer valuable lessons, but otherwise outreach in relation to the learning from the evaluation will be driven through other WPs. The summary and leaflet of the evaluation report with lessons learned will be of value for others outside the project, such as future 4DHC cities, regions, developers. They will be involved via the communication workpackage.</p>	

## Activities

Please describe activities and deliverables within the work package				
Activity nr	Title		Start month	End month
Activity 1	'Plan' Evaluation Step		Sep-2016	Apr-2017
KPIs will provide the framework for evaluation, giving it a rigorous, transnational and replicable structure. KPIs will be based on literature study. All PPs will be involved by data gathering and reviewing so that the full range of expertise and experience in the partnership is reflected in their selection. A work plan for the evaluation process will be elaborated. Input from partners will be given in the first partner meeting and results will be presented at the second meeting.				
	Deliverable nr	Title	Target value	End month
	Deliverable 1.1	Evaluation Plan	1.00	Apr-2017
Define KPIs and evaluation work plan. Plan and initiate evaluation workshops, interviews, case study analysis and reporting. Measure and record KPIs for baseline.				
Activity 2	'DO' Evaluation Step		Apr-2017	Jan-2018
Do: Evaluate KPIs, implement first recommendations and provide first input for WP HeatNet model. We will have 2 rounds (start of project and towards the end) of interviewing 5 stakeholders at each pilot site. On the basis of the first round we will analyse the KPIs status at that moment and make draft recommendations for the Heat-Model. Pilots are advised to implement these recommendations. The input from the pilots will also be gathered also in evaluation workshops at the partner meetings of year 2.				
	Deliverable nr	Title	Target value	End month
	Deliverable 2.1	Recommendations: HeatNet Model	1.00	Jan-2018
Evaluation activities will be undertaken to develop recommendations and contextual analysis which will feed into WP HeatNet Model, as a report and recommendations. This will take the first draft version of the HeatNet model and improve it based upon actual experience of using the draft version in the pilots.				
Activity 3	'Check' Evaluation Step		Jan-2018	May-2018
Check: Undertake evaluation workshops, interviews, case study analysis and reporting. Measure and record KPIs. Evaluate results of the implementation of the recommendations in the pilots. In the second round of interviews with the pilots stakeholders we will check progress on KPIs and implementation and result of the recommendations done in the previous phase. Where needed an update of the HeatNet model recommendations will be made. This final evaluation round will also provide the input for the recommendations for the transition roadmaps. In the evaluations workshops and the project meetings of year 3 input will be gathered and reviewed by the partners.				
	Deliverable nr	Title	Target value	End month
	Deliverable 3.1	Case study report cards	10.00	May-2018
Case studies (pilots and other cases) will be analysed against KPIs and report cards produced for wide dissemination				
	Deliverable 3.2	Recommendations: HeatNet Model and Transition Roadmaps	1.00	May-2018
Evaluation activities will be undertaken to develop recommendations and contextual information which will feed into WP Longterm effects, as a report and recommendations.				
	Deliverable 3.3	Barriers to implementation of 4DHC. Lead: HvA, with All PPs	1.00	May-2018
Report detailing barriers encountered by HeatNet partners and other cases in implementing DHC and 4DHC. A foundation for final Recommendations to HeatNet Model, Transition Roadmaps, and Roll out strategy				
Activity 4	'Act' Evaluation Step. GHG Reduction targets		Sep-2018	Oct-2019
The evaluation report will provide background and analysis of the KPIs, case studies and all lessons learned as were fed into the pilot's via the Heat-Model and the Transition Roadmaps recommendations. In the final project meeting the lessons learned will be presented.				
	Deliverable nr	Title	Target value	End month
	Deliverable 4.1	Output: GHG reduction targets through 4DHC replication in NWE	1.00	Oct-2019
Overall reporting on pilots and transition path followed, in 2 outputs: - Full report - Lessons learned & recommendation booklet				



WP Nr	Type	Title	Start month	End month	Budget
WP. T3	implementation	HeatNet Model	Sep-2016	Dec-2019	740 942.96

## Partners involvement

Partner responsible	Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning
Partners involved	City of Dublin Energy Management Agency Ltd, Codema. Role: LP
	Plymouth City Council, PCC. Role: PP
	CAP 2020, CAP 2020. Role: PP
	City of Kortrijk, Kortrijk. Role: PP
	Intermunicipal Association Leiedal , Leiedal. Role: PP
	Energy Cities, ECN. Role: PP
	City of Boulogne-sur-Mer, BsM. Role: PP
	University of Gent, UoG. Role: PP
	Amsterdam University of Applied Sciences, HvA. Role: PP
	7 Vents, L7V. Role: PP
	Aberdeen City Council, ACC. Role: PP
	Mijnwater B.V., Mijnwater . Role: PP
	South Dublin County Council, SDCC. Role: PP
Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning, CER. Role: PP	

## Implementation summary

Summary and objective of the work package including an explanation of how partners will be involved (who will do what). Note: Please elaborate if this work package will contribute to a project sub-objective and if so to which.
<p>Sub-objective 3: to develop transferable guidance on how to build and finance 4DHC projects. Lead: Cerema</p> <p>The HeatNet model is a tool initially built around 4DHC technology and principles and existing knowledge from project partners and pilots. It's application to different stages of transition to 4DHC will be tested in the 6 pilots, jointly evaluated and refined, so guidance is transferable to cities whatever their current 4DHC status. Each pilot represents a different stage on transition to 4DHC, and together they reflect a broad range of routes to 4DHC. It is essential to recognise this diversity as there is no one size fits all approach and so each pilot offers unique learning experiences, captured through the Evaluation WP.</p> <p>The HeatNet Model will focus on 'How do I build 4DHC?' and 'How do I finance 4DHC?' and will produce:</p> <ol style="list-style-type: none"> <li>1. Non-technical guide to 4DHC will inform decision makers regarding principles &amp; characteristics of 4DHC, explaining its benefits and how it differs from traditional DHC. Lead: Cerema, with Codema, UoG, HvA</li> <li>2. Diagnostic and planning tools: 4DHC heat mapping, CO2 emission calculator, tested on selected pilots. Cerema, CAP2020, Codema, HvA, UoG.</li> <li>3. A Procurement Guide to help pre-assess experts, ensuring projects are well designed. Energy Cities, CAP2020, Leiedal.</li> <li>4. Governance and partnership options, including for conventional Energy Sector, that will provide co-finance, including development finance for planning stages. Developed from pilot experiences. 7Vents leads, with Aberdeen, Mijnwater BV, CAP2020, S. Dublin.</li> <li>5. Pricing model, tested in pilot regions and adapted for transnational use. Cerema.</li> <li>6. Protocols for investment standards (linked with Investor Confidence Project), which bring projects to investment ready status. Plymouth will lead engagement with ICP, shaping non-tech guide, CO2 calculator, pricing model and procurement guide into a 4DHC protocol. Cerema and Codema fully involved.</li> </ol>

## Main outputs

Please describe the project main outputs that will be delivered based on the activities carried out in this investment. For each project main output a programme output indicator should be chosen. Please note that they need to have the same measurement unit.				
Project main output	Describe the project main output and its contribution to project sub-objectives	Quantify the contribution	Delivery month	Programme output indicator to which the project main output will contribute. Please check the Programme Manual for the obligatory output indicators.
Guide to the HeatNet Model	The HeatNet Model is a business model for 4DHC projects. This guide will include descriptions of a range of tools to help implement the model, and top tips for their use. Case studies based on pilot investments will illustrate their application. The tools are focussed on the most difficult challenges of building and financing 4DHC projects.	1.00	Dec-2019	2.01. Number of solutions facilitating the delivery of existing or emerging low carbon, energy or climate protection strategies

**Target groups**

<p>Who will use the main outputs?</p>	<ul style="list-style-type: none"> <li>• local public authority</li> <li>• regional public authority</li> <li>• national public authority</li> <li>• sectoral agency</li> <li>• infrastructure and (public) service provider</li> <li>• education/training centre and school</li> <li>• enterprise, excluding SME</li> <li>• SME</li> <li>• business support organisation</li> </ul>
<p>How will target groups be involved in the development of the project main outputs?</p>	
<p>Target groups fall into distinct groups: • Scheme developers • Expert service providers (technical design, financial appraisal, legal) • Financing sector These groups will be involved directly in developing WP outputs, through engagement in the pilot and other activities and the Evaluation process, which includes stakeholder interviews. Beyond those involved in pilots: expert service providers will be involved in the development of the Procurement Guide, which will involve some industry level discussion. The Financing sector will be involved through engagement with ICP, an expanding EU-wide network. Scheme developers will be a central focus of the rollout strategy and business cases in the Longterm WP, which will use material developed in this WP and derived directly and through the evaluation process. The Long term and Communications WPs contain a range of engagement and dissemination actions.</p>	

## Activities

Please describe activities and deliverables within the work package				
Activity nr	Title		Start month	End month
Activity 1	Develop tools for delivery of 4DHC projects		Sep-2016	Dec-2019
Expert PPs will write a non-technical Guide to 4DHC, explaining the 4 principles and how they interrelate. Energy efficiency retrofitting has a special focus, DH needing to be better integrated with it. Pilots + 7Vents (Normandy) will undertake/revise heat mapping to take a 4DHC perspective: adopting different heat thresholds. CO2 emission savings calculator will be tested and standardised for transnational use. A Guide for access to quality-checked expertise will be developed.				
	Deliverable nr	Title	Target value	End month
	Deliverable 1.1	4DHC project tools. Lead: Cerema, with HvA, Codema, CAP2020, Leiedal, UoG	3.00	Dec-2019
Development of non-technical guide to 4DHC; guide to mapping heat demand and low grade waste heat from 4DHC perspective; CO2 emission calculator to provide accurate savings forecasts.				
	Deliverable 1.2	Guidance on integrating 4DHC with energy efficiency retrofitting. Lead: Codema, with CAP2020, 7Vents, Cerema, Aberdeen, S.Dublin	1.00	Dec-2019
4DHC benefits significantly from low energy buildings. This publication will explain how to integrate 4DHC and Energy Efficiency investments to ensure key opportunities are not missed.				
	Deliverable 1.3	4DHC Procurement Guide. Lead: Energy Cities, with CAP2020, Codema, Kortrijk, BsM	1.00	Dec-2019
A procurement guide on how to select and access multiple expert service providers selected according to quality criteria, to ensure procurement of qualified expertise. 4DHC is new. Project developers require the right expertise to develop good schemes.				
	Deliverable 1.4	4DHC Technology Guide. Lead UoG, with Mijwater BV, CAP2020	1.00	Dec-2019
A technical guide to 4DHC technology, energy grid integration, and building energy management.				
	Deliverable 1.5	4DHC Guide to home and building energy management. Lead: 7Vents, with BsM, S.Dublin, Aberdeen	1.00	Dec-2019
A guide to good energy management in buildings supplied by 4DHC, including resident engagement and behaviour change approaches.				
	Deliverable 1.6	4DHC guide to Governance/Business Models. Lead: CAP2020, with Plymouth, Aberdeen, Leiedal, 7Vents, S.Dublin, BsM, Kortrijk	1.00	Dec-2019
A detailed guide to establishing partnership/joint venture and other structures for managing 4DHC networks, and business models, heat supply contracts and other institutional aspects.				
Activity 2	Develop tools for 4DHC finance		Sep-2016	Dec-2019
Finance is one of the most significant barriers to 4DHC. This reflects underlying risk. Measures are needed to de-risk projects. We will develop project outputs into a 'Protocol' for 4DHC scheme proposals to bring them to 'investment ready' standard, working with ICP, incorporating non-technical guide, heat mapping guide, Procurement Guide, CO2 calculator, pricing model to estimate revenue streams, existing technical standards (e.g. CIBSE Heat Networks: Code of Practice for the UK).				
	Deliverable nr	Title	Target value	End month
	Deliverable 2.1	Guide to financing 4DHC. Lead: Plymouth, with Codema, Mijwater BV, CAP2020, UoG	1.00	Dec-2019
Report, providing overview of finance options, including both regional options and EU Financial Instruments. Regional options include partnerships, ESCOs, financial tools (eg Bonds), and integration of schemes with wider Energy Efficiency investments				
	Deliverable 2.2	4DHC Protocol for ICP. Lead: Plymouth, with Cerema, CAP2020, Mijwater BV, UoG, Codema	1.00	Dec-2019
Protocol for standardisation of 4DHC project design, developed with guidance from ICP Europe. Protocols will contribute to ICP tools developed to finance large Energy Efficiency investment projects. Includes development of pricing model/comparator				
Activity 3	Define the HeatNet Model		Sep-2016	Dec-2019
The HeatNet Model will be a Business Model based on 4DHC principles. This activity will be to package the tools described above into a single guide and using material from other WPs. Cerema will lead the process, working with all PPs. The guide will cover: 4DHC scope, elements, principles of design, governance and financial characteristics; policy and regulatory requirements; provision of expertise, procurement and finance.				
	Deliverable nr	Title	Target value	End month
	Deliverable 3.1	Main Output: HeatNet Model guide. Lead: Cerema, with all PPs	1.00	Dec-2019
The HeatNet model guide will describe the fundamental principles and operational characteristics of 4DHC, and include guidance regarding 4DHC design and mechanisms to gain access to 4DHC finance and 4DHC expertise for individual projects.				

WP nr	Type	Title	Start month	End month	Budget
WP 11	investment	Plymouth Living Lab	Sep-2016	Nov-2019	1 541 087.91

## Partners involvement

Partner responsible	Plymouth City Council
Partners involved	City of Dublin Energy Management Agency Ltd, Codema. Role: LP
	Plymouth City Council, PCC. Role: PP
	CAP 2020, CAP 2020. Role: PP
	University of Gent, UoG. Role: PP
	Amsterdam University of Applied Sciences, HvA. Role: PP
	Mijnwater B.V., Mijnwater . Role: PP
	South Dublin County Council, SDCC. Role: PP
	Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning, CER. Role: PP

## Investment summary

Please provide a description of the investment phases and technical specifications; if several partners are involved please specify who will do what.

Note: Please elaborate if this investment will contribute to a project main output.

Plymouth City Council's (PCC) History Centre (HC) is adjacent to the University (UoP) Campus and close to student residential and other large public buildings. UoP has an existing heat network. Heat mapping and master planning studies have confirmed that its expansion has the potential to catalyse a wider heat network in the City Centre, of which there are other nodes under consideration at Millbay and Civic Centre. The planned refurbishment of the History Centre is an ideal opportunity to establish a 1st phase of this wider heat network. However, agreement to proceed is hampered by marginal viability and potentially unacceptable levels of financial risk for the UoP and PCC. HeatNet investment will alleviate those tensions and facilitate an agreement between the two parties to make the 1st stage of the city centre network a reality. The refurbished HC will operate at 4DHC temperatures and will increase the performance and running hours of the UoP CHP plant, providing electricity and low carbon heat saving 500t CO<sub>2</sub> pa. The investment comprises 3 phases. At each, the HeatNet 4DHC Team (HvA, UoG, Cerema, Codema, CAP2020) will review and advise on proposals, against 4DHC principles. Investment PPs Mijnwater BV and S. Dublin will mentor. All decisions on this pilot investment will be subject to joint decision making of the HeatNet steering group.

Ph1 Feasibility Business Case for the 1st & 2nd investment stages, between UoP and HC 1st, then for an expanded heat network east and west of the UoP.

Ph2 Design technical and contract documentation, public procurement of a contractor, detailed design of the pipeline including ancillary on and off campus works. Commercial agreements – heat supply and related agreements between PCC and UoP.

Ph3 Implementation. Installation all infrastructure between UoP and HC. Network extensions as part of city centre heat network, as recommended by business case and detailed feasibility.

## Justification

Explain the need for this investment to achieve project objective and results.

This pilot was chosen specifically because PCC is at mid-stages of developing DH in a relatively new DH market in UK, but has met intractable barriers. PCC has already valuable experience to contribute to the initial draft HeatNet Model, such as heat mapping, detailed feasibility, and DH planning. PCC need HeatNet to progress, using the HeatNet model's learnings from all other pilots and partners, particularly how to increase compatibility of 4DH, business models, how to best route DH networks. When complete, it will deliver energy, cost and carbon savings, be a demonstration for 4DH potential, and provide technical and non-technical evidence for the HeatNet evaluation, including how to upgrade college campus DH systems, public buildings as anchor loads, installing DH in busy urban areas, how to develop public/private contracts, and spatial policies for 4DH. End users include owners and users of public sector buildings and residential accommodation, who will benefit from lower heat costs.

<b>Location of the investment</b>
The investment is located in Plymouth City Centre, between the University campus and the city museum/library on North Hill.
NUTS 3 code
UKK41
<b>Ownership</b>
Who owns the site where the investment is located? Who will retain ownership of the investment after the end of the project? Who will take care of maintenance of the investment? How will this be done?
PCC own the History Centre building and adjacent land including an existing small building which may be used to house ancillary plant, if hydraulic separation from UoP's heat network is required. The remainder of the land for the installation of the pipeline infrastructure is either owned by PCC or UoP. The intention is for PCC to retain ownership of all pipeline infrastructure and any other off-Campus assets. Investment in UoP's owned non-pipeline infrastructure will be retained by UoP. The pipeline will require limited maintenance. However, the aim will be to let a maintenance contract for the History Centre equipment including the pipeline with a requirement to monitor its performance. UoP will maintain its related Campus infrastructure through its existing arrangements. Provision will also be made to allow the pipeline to be extended to other properties as the heat network is expanded and as additional heat capacity comes available.
<b>Investment documentation</b>
Please list the main technical requirements and permissions (e.g. building permits) required for the investment according to the respective national legislation. Please indicate if they are already available and if not by when they can be expected.
Technical requirements - There are no UK national regulations for heat networks, other than the Metering and Billing Regulations 2014, and therefore no specific technical requirements regarding the connection. Legislation is unlikely to be introduced during the lifetime of the project. However, various guidelines are already available providing guidance on best practice, including the CIBSE UK Heat Networks Code of Practice, March 2016. Permissions - The preferred route for the pipeline has been identified. As this project is being promoted jointly by PCC and UoP on land in either PCC's or UoP's ownership, the connection can be delivered under Permitted Development Rights in accordance with the Town and Country Planning (General Permitted Development) Order 1995 (as amended). If works are required to the small building adjacent to the History Centre for hydraulic separation, planning permission for change of use may be required.
<b>Risks associated with the investment</b>
Description of the risks associated with the official approval of local/regional/national authorities, feasibility study required, procurement process to be applied, linked to the practical implementation phase, etc.
Risks of the pilot investment : Planning permission - risk low. Land ownership - risk low. Pipeline routing - risk medium. (Delivery risks due to other services in highway. Ground penetration radar surveys undertaken). Strategic investment - risk medium. (Joint approval of business case including need to sell heat across the UoP's boundary to PCC. Principle of district heating serving the History Centre established subject to heat availability). Pipeline connection and ancillary works procurement and construction - risk low. Programme and timetable - risk low. (Flexibility built into History Centre refurbishment contract to allow time to conclude commercial arrangements and deliver heat connection). Public acceptance - low risk. Disruption to existing University heat network - risk low. Finance - risk medium. (Assumed co-funding available reduces risk. However, also depends on the result of modelling heat pricing and heat availability for the different phases of investment).

**Main outputs**

Please describe the project main outputs that will be delivered based on the activities carried out in this work package. For each project main output a programme output indicator should be chosen. Please note that they need to have the same measurement unit.				
Project main output	Describe the project main output and its contribution to project sub-objectives	Quantify the contribution	Delivery month	Programme output indicator to which the project main output will contribute. Please check the Programme Manual for the obligatory output indicators.
		0.00	Sep-2019	2.08. Estimated annual decrease of GHG

## Target groups

Target groups per main project output	
Who will use the main outputs?	<ul style="list-style-type: none"> <li>• local public authority</li> <li>• national public authority</li> <li>• higher education and research</li> </ul>
How will target groups be involved in the development of the project main outputs?	
<p>The relationship between UoP and PCC will evolve as commercial terms are negotiated and as new risks and challenges emerge in planning for the network's expansion. Evidence from the evaluation of the pilot and the development of the local transition roadmap will be shared with various target groups. These include: 1. Public and private sector organisations in the vicinity of the catalyst network, e.g. University Partnerships Programme (UPP) responsible for student accommodation, the College of Arts and Technology and the Copthorne Hotel; 2. Other stakeholders in the City who potentially might benefit from 4DH, e.g. the Hospitals Trust, local Housing Associations and private developers. Stakeholder feedback will therefore not only shape and support the main project outputs but will also impact on the expansion potential of the heat network, the opportunity to leverage private sector investment and the pace and enthusiasm for developing 4DH in other areas of the City.</p>	

## Activities

Please describe activities and deliverables within the work package				
Activity nr	Title		Start month	End month
I1.1	Feasibility: Business Case Development for Heat Network		Sep-2016	Jul-2017
Heat mapping, technical feasibility and detailed options and costs already completed. The results, together with the options for procurement, draft commercial terms of the heat supply agreement and the sources of finance, will inform the preparation and approval of a joint business case. The business case development process will provide evidence for the HeatNet model and will also feed the evaluation work package and inform the local transition roadmaps and the 4DH guide.				
	Deliverable nr	Title	Target value	End month
	Deliverable I1.1.1	Business Case for the Heat connection to the Plymouth History Centre	1.00	Jun-2017
Joint business case prepared by PCC, supported by UoP, with external legal, commercial, financial and technical advice. Advice will also be drawn from other members of the consortium.				
	Deliverable I1.1.2	Business Case for wider city centre heat connections to buildings east and west of Plymouth University's Campus	1.00	Jul-2017
Joint business case prepared by PCC, supported by UoP, with legal, commercial, procurement, financial and technical advice. Advice will be drawn from other members of the consortium				
	Deliverable I1.1.3	Transnational Review of Business Case	1.00	Jul-2017
4DHC Team and mentors review Business Case against 4DHC principles and provide written summary and recommendations.				
I1.2	Design and Technical Documentation for the procurement of the Heat Connection and related Commercial Agreements:		Sep-2016	Mar-2018
Completion of the design and specification and agreement of commercial terms between PCC and UoP allowing for potential growth of the heat network, on and off-Campus, including a framework for governing the relationship between PCC and UoP. This could vary from full collaboration on specific terms or the right to purchase heat supplies and the right to sell heat on. Resolve conflicting positions, eg reliability of heat supply, penalties for failure, volume of heat required, timing of heat.				
	Deliverable nr	Title	Target value	End month
	Deliverable I1.2.1	Detailed design and procurement	1.00	Mar-2018
Detailed design and specification of works for the connection, including ancillary/enabling works. Procurement of a works contractor.				
	Deliverable I1.2.2	Heat supply agreement and related commercial documentation	1.00	Mar-2018
Report by PCC, including the negotiated heat supply agreement and other collaboration and commercial documentation, for connection of the History Centre.				
I1.3	Implementation: Delivery of a heat connection to the History Centre		Mar-2018	Nov-2019
This activity will involve the installation of the pipes and ancillary equipment and will most likely involve hydraulic separation from the existing Campus heat network. In addition to the pipeline of some 180m, which will cross a busy city street, it will include the installation of primary heat exchanger on the Campus and additional water treatment, pressurisation and pumps in a disused building adjacent to the History Centre. Connection to residential blocks.				
	Deliverable nr	Title	Target value	End month
	Deliverable I1.3.1	Procurement and delivery of the heat connection from the University's Heat Network to the History Centre	1.00	Nov-2019
Procurement documentation and process. Installation of network pipes and ancillaries.				



WP nr	Type	Title	Start month	End month	Budget
WP I2	investment	South Dublin Living Lab	Sep-2016	Nov-2019	1 025 426.00

## Partners involvement

Partner responsible	South Dublin County Council
Partners involved	City of Dublin Energy Management Agency Ltd, Codema. Role: LP
	Plymouth City Council, PCC. Role: PP
	CAP 2020, CAP 2020. Role: PP
	University of Gent, UoG. Role: PP
	Amsterdam University of Applied Sciences, HvA. Role: PP
	Mijnwater B.V., Mijnwater . Role: PP
	South Dublin County Council, SDCC. Role: PP

## Investment summary

Please provide a description of the investment phases and technical specifications; if several partners are involved please specify who will do what.

Note: Please elaborate if this investment will contribute to a project main output.

An area of S Dublin has high potential to develop a DH network. Customers identified as main anchor loads for the initial phase of DH development are public sector buildings including a large national hospital. These customers are supportive and have provisionally agreed to connect saving 1900t CO<sub>2</sub>/pa after 5yrs. The investment involves the large upfront costs of DH pipework installation (just under 1km pipe) to connect these buildings to an energy centre site. The energy centre site and most land in the area is under ownership of the municipality. The investment is planned in 3 phases & all will be jointly decided upon by the Steering Group. At each Phase the HeatNet 4DHC Team (HvA, UoG, Cerema, Codema, CAP2020) will review and advise against 4DHC principles and the evolving HeatNet model. Investment PPs Mijnwater BV and Plymouth will mentor. Ph1 Feasibility: Preliminary study of possible pipe route - minimise route length, identify existing utilities, possible traffic and business disruption, minimise way leaves. Site investigations - to identify potential issues in pipe installation, i.e. geology, other underground services in the area, environmental issues, disruption to nearby sites, etc. Ph2 Design: Preliminary techno-economic design of energy centre - Take account of 4DH principles and look to supply the DH system with least fuel intensive/CO<sub>2</sub> producing resources. Procurement of contractor to install and design the pipelines and heat exchangers. Final pipeline design and routing based on temperature requirements, pressures, depth/width of trench required, reducing losses, 4DH principles etc. Design of customer DH system retrofit - heat exchanger sizes, etc. Ph3 Implementation: Pipeline installation by contractor to install pipelines, heat exchangers, manifolds etc. The investment will enable future components of the network: Final energy centre design and construction. All phases will contribute to and learn from the HeatNet model & adapt accordingly.

## Justification

Explain the need for this investment to achieve project objective and results.

This pilot was chosen specifically as Dublin is at very early stages of planning DH in a market with no DH and faces many barriers. Dublin has experience it can contribute to the initial draft HeatNet Model, such as heat mapping, DH planning and feasibility methods & metrics. In order to establish DH in Ireland, Dublin needs to access the learnings of other pilots and partners through utilising the HeatNet model, particularly how to choose pipe sizes and routes, retrofit DH in large public buildings and business models for DH. When complete, it will be the only DH system in Dublin, delivering cost, energy and CO<sub>2</sub> savings for public sector buildings, and will result in evidence-based barrier identification and tool implementation for the HeatNet Model, including how to establish DH and supply contracts in a new market, and optimising existing buildings for 4DH. The end-users are public sector buildings and will benefit from expertise and co-funding of upfront costs of DH infrastructure

<b>Location of the investment</b>
Located in the dense urban location of Tallaght within the municipality of South Dublin, in the mid-eastern of Ireland, the investment is set between a group of buildings, the majority of which are publicly owned, in the heart of Tallaght town centre
NUTS 3 code
IE021
<b>Ownership</b>
Who owns the site where the investment is located? Who will retain ownership of the investment after the end of the project? Who will take care of maintenance of the investment? How will this be done?
The municipality, South Dublin County Council (SDCC), and the National Adelaide and Meath Hospital own the sites where the pipeline will be routed, therefore no way leaves are expected. South Dublin municipality will retain ownership of the pipeline investment, and will retain ownership of heat exchangers on both sites. SDCC will obtain a maintenance contract for the pipelines and heat exchangers, possibly included in the contract procured for ESCO services for the energy centre. The pipelines themselves will require little maintenance. The pipelines will have advanced sensor systems to warn of any breaches in insulation or leakage.
<b>Investment documentation</b>
Please list the main technical requirements and permissions (e.g. building permits) required for the investment according to the respective national legislation. Please indicate if they are already available and if not by when they can be expected.
Technical Requirements: There are currently no national regulations or legislation for heat networks, and therefore no technical requirements regarding pipeline installation. There are no expectations that these will become available during the project lifetime, and so best practice standards will be applied, such as CIBSE UK Heat Networks Code of Practice. Permissions needed: Planning permission for civil works to install underground pipelines. Has not already been applied for as the final pipeline route has not been defined. This will be applied for after the final pipeline design and route has been chosen by contractor, approximately Q2 Y2.
<b>Risks associated with the investment</b>
Description of the risks associated with the official approval of local/regional/national authorities, feasibility study required, procurement process to be applied, linked to the practical implementation phase, etc.
Planning permissions: Risk Level Low Local/National authorities approval: Risk Level Low Customer connections: Risk Level Low Contractor Procurement: Risk Level low ESCO procurement: Risk Level low Public acceptance: Risk Level Low Suitable pipe route: Risk Level Low Disruption to Hospital Supply: Risk Level low Private wire network compliance: Risk Level medium Geophysical constraint delay: Risk Level low A medium level risk identified is the regulations surrounding private wire network use in Ireland, which may mean a CHP based DH system may not be possible in this case. This risk is only for a system involving a CHP, and the DH supply can alternatively be based on a boiler system with no electrical production, but this option is likely to have a lower economic return.

## Main outputs

Please describe the project main outputs that will be delivered based on the activities carried out in this work package. For each project main output a programme output indicator should be chosen. Please note that they need to have the same measurement unit.				
Project main output	Describe the project main output and its contribution to project sub-objectives	Quantify the contribution	Delivery month	Programme output indicator to which the project main output will contribute. Please check the Programme Manual for the obligatory output indicators.
		0.00	Dec-2019	2.08. Estimated annual decrease of GHG

## Target groups

<b>Target groups per main project output</b>	
Who will use the main outputs?	<ul style="list-style-type: none"> <li>• local public authority</li> <li>• sectoral agency</li> <li>• infrastructure and (public) service provider</li> <li>• SME</li> </ul>
How will target groups be involved in the development of the project main outputs?	
Users of the outputs: Municipalities – South Dublin County Council, other councils planning networks; Public sector bodies – Energy Regulator, Hospital, Sustainable Energy Authority; Customers – Hospital, Municipality, other surrounding buildings; ESCOs – Potential operators of the system. How they will be involved: Public sector bodies – the Central Energy Regulator will be consulted on regulation for heat networks; Sustainable Energy Authority of Ireland will be consulted on CHP regulations and will use the outputs from this pilot to showcase to the rest of Ireland; The National Hospital is the main anchor load customer on the Network; Municipalities – South Dublin County Council are leading this Investment; Customers – will be consulted and informed throughout the project; ESCOs – Energy companies will be consulted regarding interest and proposals for the Energy Centre design and operation.	

## Activities

Please describe activities and deliverables within the work package				
Activity nr	Title		Start month	End month
I2.1	Feasibility: Preliminary Study of Energy Centre Site and Pipe Route Options		Sep-2016	Apr-2017
Choose energy centre site, and identify options for pipeline routes analysed, minimising route length, identify health and safety issues, identify existing utilities, possible traffic and business disruption, reduce way leaves, etc. This activity will be informed by strategic studies (Dublin Roadmap, Long-term WP). Lessons learned will contribute to HeatNet Model WP deliverable '4DHC Design Toolkit' .				
	Deliverable nr	Title	Target value	End month
	Deliverable I2.1.1	Preliminary Study of Options for 4DH site in Tallaght, South Dublin	1.00	Apr-2017
Report. Carried out by CODEMA and SDCC. Input/advice from expertise within consortium. Presenting an options appraisal and recommendations.				
	Deliverable I2.1.2	Transnational Review of Options Appraisal	1.00	Apr-2017
4DHC Team and mentors review Options Appraisal against 4DHC principles and provide written summary and recommendations				
I2.2	Design: Preliminary Techno-Economic Design Options for 4DH Energy Centre		Sep-2016	Mar-2017
The analysis will take account of technical 4DH principles and appraised from a socio-economic perspective, with outputs based on how to make most socio-economic beneficial option attractive from a business-economic perspective. It will also inform the options for procurement of an ESCO to build and operate the centre, and the space which may be required for the energy centre (biomass storage, hot water storage, etc.).				
	Deliverable nr	Title	Target value	End month
	Deliverable I2.2.1	Preliminary Techno-Economic Design Options for 4DH Energy Centre	1.00	Mar-2017
Report. Carried out by CODEMA, with input/feedback from expertise within the consortium. Comprising outline business case and high level design parameters.				
I2.3	Implementation: Procurement and Delivery of infrastructure for DH system		Apr-2017	Nov-2019
Procurement of detailed site investigations, 4DHC pipeline design and installation, and procurement of an ESCO for a Design Build Operate (DBO) contract, or similar, for the Energy Centre. Expertise is required for a site investigation to identify potential issues in pipe installation such as geology, other underground services in the area, environmental issues, disruption to nearby sites, etc., and may require ground penetrating radar surveys.				
	Deliverable nr	Title	Target value	End month
	Deliverable I2.3.1	Procurement and Delivery of Services for Final Site Investigations	1.00	Jun-2017
Specification of works agreed, documentation published and procurement undertaken according to relevant procedures. Contractor appointed and Site investigation report delivered.				
	Deliverable I2.3.2	Procurement of DH Network and Energy Centre (Design Build Operate contract)	1.00	Jan-2018
Scope and specification of contract agreed, documentation published and procurement undertaken according to relevant procedures. Contractor appointed.				
	Deliverable I2.3.3	DH Network Construction and Heat Exchanger Installation	1.00	Nov-2019
Construction and installation of twin insulated heat network pipes between the hospital, municipal offices and energy centre site, according to agreed design. Heat exchangers installed at municipal offices and hospital.				

WP nr	Type	Title	Start month	End month	Budget
WP I3	investment	Aberdeen Living Lab	Sep-2016	Nov-2019	726 347.50

### Partners involvement

Partner responsible	Aberdeen City Council
Partners involved	City of Dublin Energy Management Agency Ltd, Codema. Role: LP
	CAP 2020, CAP 2020. Role: PP
	City of Kortrijk, Kortrijk. Role: PP
	City of Boulogne-sur-Mer, BsM. Role: PP
	University of Gent, UoG. Role: PP
	Amsterdam University of Applied Sciences, HvA. Role: PP
	Aberdeen City Council, ACC. Role: PP
	Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning, CER. Role: PP

### Investment summary

Please provide a description of the investment phases and technical specifications; if several partners are involved please specify who will do what.

Note: Please elaborate if this investment will contribute to a project main output.

Extending existing DH through city centre to connect a mix of public sector buildings, offices, retail units and an educational establishment, whilst establishing the prospect and principals of 4DHC. Saving 7000t CO2 pa. At each Phase, the HeatNet 4DHC Team (HvA, UoG, Cerema, Codema, CAP2020) will review & advise on proposals against 4DHC principles. Investment PPs BsM and Kortrijk will mentor. Decisions will be subject to joint decision making of HeatNet steering group.

Ph1 Feasibility. Aberdeen City Council (ACC) and Aberdeen Heat & Power (AH&P) will lead stakeholder discussions regarding the intended network: extension of the network from an existing node, Town House, to Aberdeen Art Gallery and City Library – all providing anchor loads for development of the city centre network. Originally conceived as 3DHC the routes to 4DHC will be explored. Potential commercial customers will be engaged. For targeted buildings, a full feasibility study will determine patterns and level of consumption, types of heating systems currently installed, the potential to make a district heating connection and the cost and potential to convert internal systems to lower temperature operating systems to satisfy the requirements of the 4DHC system. The feasibility study would identify the costs involved in installation of the network, the connection details and costs / cost savings for each potential stakeholder and the level of carbon saving that could be identified. This phase will be undertaken by AH&P in consultation with an experienced district heating designer/consultant. Ph2 Design. A specification of performance will highlight options that are available and the technical solutions for the network and the individual connections, taking account of the design of each node and how they can be built into a 4DHC system at the outset, or later. A design consultant will be appointed. Ph3 Implementation. The network main will be installed and buildings connected.

### Justification

Explain the need for this investment to achieve project objective and results.

This pilot was chosen specifically because Aberdeen already has some small DH systems but is facing barriers to extending and connecting the network & incorporating 4DH. Aberdeen has valuable experience it can contribute to the initial draft HeatNet model, such as details around current DH system operation, planning and contracts, and business models used. In order to progress their DH plans, Aberdeen needs HeatNet to provide guidance on identifying suitable demands, connecting DH nodes & retrofitting for low-temperature supply. This will be provided by other pilots and partners through evaluation feedback for the HeatNet Model. When complete, this investment will deliver valuable cost savings, low-carbon energy & CO2 savings, and learnings for the HeatNet model such as how to lower temperature requirements, integrating waste heat and gaining customer connection agreements. The end-users are public, commercial and residential buildings, benefitting from lower costs.

<b>Location of the investment</b>
The project location is Schoolhill within the city centre of Aberdeen, bounded by the Town House and Aberdeen City Library
NUTS 3 code
UKM50
<b>Ownership</b>
Who owns the site where the investment is located? Who will retain ownership of the investment after the end of the project? Who will take care of maintenance of the investment? How will this be done?
The roads through which the network piping would pass are managed by the City Council (ACC) . Obtaining planning permission for pipework routing would generally not be refused without good grounds. The City Council owns and operates anchor load buildings at each end of the proposed development route and also an interim anchor load. Other potential connections to non-Council stakeholders would be owned by private landlords and any wayleaves required to pass through their grounds would be required to form part of the connection agreement, but these are not critical to the scheme. Aberdeen Heat & Power (AH&P) will retain ownership for the underground piping and connection points up to agreed demarcation points within buildings, and ultimately be responsible for its care and maintenance. A framework agreement is already in place between ACC and AH&P covering these aspects. In the case of demise of AH&P, ownership of the Network will resort to Aberdeen City Council.
<b>Investment documentation</b>
Please list the main technical requirements and permissions (e.g. building permits) required for the investment according to the respective national legislation. Please indicate if they are already available and if not by when they can be expected.
Planning permission will be required for the installation works of the underground piping within the public highway on this proposed route for the pilot project. This would carry restrictions for traffic management and specification of the re-instatement of road surfaces and sub surfaces. The planning application will be submitted following survey of existing services and detailed route planning. This cannot be applied for as yet, being subject to the feasibility studies, but in the past this has not been unduly with-held. Individual connections to non-council properties will require approval by respective landowners / landlords, but if a connection is feasible and agreeable, then an agreement would be put in place which covered the terms of the installation and connection and thereby the supply arrangements.
<b>Risks associated with the investment</b>
Description of the risks associated with the official approval of local/regional/national authorities, feasibility study required, procurement process to be applied, linked to the practical implementation phase, etc.
The principal risks associated with this project are: • Risk to routing of network piping due to existing services in a busy and established part of the city • Road closure management • Non participation of private sector stakeholders • Development of 4DHC principals in older style buildings and systems • Capacity of the network to support the pilot (may be dependent on investment elsewhere to provide capacity) • Approval of Local Authority Committee • Approvals of all key stakeholders to meet the project programme • Programme timeline implications due to one or more of the above risks • Choice of the experienced design company to carry out the detailed feasibility study • Planning constraints in this part of the city The risks highlighted are relatively low and are mitigated through applying early stakeholder engagement, developing detailed designs, and following procedure for planning approval for the pipeline which would generally not be refused without good grounds.

**Main outputs**

Please describe the project main outputs that will be delivered based on the activities carried out in this work package. For each project main output a programme output indicator should be chosen. Please note that they need to have the same measurement unit.

Project main output	Describe the project main output and its contribution to project sub-objectives	Quantify the contribution	Delivery month	Programme output indicator to which the project main output will contribute. Please check the Programme Manual for the obligatory output indicators.
		0.00	Sep-2019	2.08. Estimated annual decrease of GHG

## Target groups

Target groups per main project output	
Who will use the main outputs?	<ul style="list-style-type: none"> <li>• local public authority</li> <li>• sectoral agency</li> <li>• infrastructure and (public) service provider</li> <li>• enterprise, excluding SME</li> <li>• SME</li> </ul>
How will target groups be involved in the development of the project main outputs?	
<p>The main target groups will be public sector and commercial sector. Public stakeholders are within the City Council: Property Asset Management, Facilities Management, and relevant service heads. Commercial stakeholder are the landlords and leaseholders/owners of commercial premises along the route of the network. First priority will be to gain agreement regarding connection of the anchor loads (Town House, Art Gallery, City Library) through identification and meeting with individual decision-makers, internal reports and presentation to Elected Members. Commercial decision makers will be identified through a stakeholder analysis. Contact will be individually tailored, making the most of existing relationships. Detailed discussions and commercial agreements will follow on, as appropriate.</p>	

## Activities

Please describe activities and deliverables within the work package				
Activity nr	Title		Start month	End month
I3.1	Feasibility: Preliminary Feasibility Study for Demonstration Area		Sep-2016	Jul-2017
Study into the potential for the extension of the existing heat network through the city centre, looking at the options of how delivery can be made, the network capacity, and investigation of integrating 4DHC principles into an existing network. The pipeline routes will require investigation due to the existing city centre infrastructure and traffic routes.				
	Deliverable nr	Title	Target value	End month
	Deliverable I3.1.1	Feasibility Study	1.00	Jun-2017
Report on technical and economic viability, considering various technical and operational options.				
	Deliverable I3.1.2	Provide data on energy use and the type of energy contracts which are in place	1.00	Jun-2017
Gather detailed data on energy consumption, and supply in commercial buildings; how businesses buy their energy, type/length of contract; how purchasing decisions are made, including relevant Landlord agreements which are held				
	Deliverable I3.1.3	Transnational Review of Business Case	1.00	Jul-2017
4DHC Team and mentors review Business Case against 4DHC principles and provide written summary and recommendations				
I3.2	Design: Preparing detailed design, and securing consents		Sep-2016	Mar-2018
Procuring consultants to prepare a detailed design of the heat network, including route of the pipe. Securing consents.				
	Deliverable nr	Title	Target value	End month
	Deliverable I3.2.1	Final design and consents	1.00	Mar-2018
Evaluate design options and develop final business case. Determine most appropriate pipe routes and go through formal planning process to secure consent. Identify, negotiate and secure any way leaves required.				
I3.3	Implementation: Heat network construction		Mar-2018	Nov-2019
Preparation and implementation of the investment which will include the procurement of contractor and installation and commissioning of the infrastructure.				
	Deliverable nr	Title	Target value	End month
	Deliverable I3.3.1	Procure contractor	1.00	Dec-2018
Procure contractors and infrastructure equipment through OJEU compliant scheme. Evaluate tender returns based on quality and cost effectiveness measures and ultimately place contracts for pipework supply, civil works and installation of pipework				
	Deliverable I3.3.2	Installation of mains pipework and ancillaries	1.00	Nov-2019
Installation and commissioning of underground pipework and branches to termination points at relevant buildings along the main route, including connection back to the existing network at Town House.				

WP nr	Type	Title	Start month	End month	Budget
WP I4	investment	<b>Kortrijk Living Lab</b>	Sep-2016	Nov-2019	1 428 859.50

### Partners involvement

Partner responsible	City of Kortrijk
Partners involved	City of Dublin Energy Management Agency Ltd, Codema. Role: LP
	CAP 2020, CAP 2020. Role: PP
	City of Kortrijk, Kortrijk. Role: PP
	Intermunicipal Association Leiedal , Leiedal. Role: PP
	City of Boulogne-sur-Mer, BsM. Role: PP
	University of Gent, UoG. Role: PP
	Amsterdam University of Applied Sciences, HvA. Role: PP
	Aberdeen City Council, ACC. Role: PP
Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning, CER. Role: PP	

### Investment summary

<p>Please provide a description of the investment phases and technical specifications; if several partners are involved please specify who will do what. Note: Please elaborate if this investment will contribute to a project main output.</p>
<p>The area of ‘Campus Kortrijk Weide’ is a brownfield, and is a site where sustainability in all its aspects will be the lead precondition in the development. An ecological area of 2.5 ha is planned; along with the construction of new public buildings, including a hall and a swimming pool and two new school buildings. 3DHC was previously anticipated but viability is a barrier. 4DHC could be the solution. HeatNet investment will enable testing 4DHC suitability and benefits and allow on site research, eg on alternative energy sources.</p> <p>The system will be based on a CHP (combined heat and power) &amp; a double pipeline, allowing flexibility in temperature and heat source of the network. Furthermore on a larger scale, along the river Leie, reconversion of an old hospital, new dwellings, reconversion of a school site and industrial zones will take place. The garbage incinerator is located at 3.4 km from the furthest development. The municipality wants to invest (together with other partners in ESCO – Energy Services Company) in a connection between the incinerator and the new developments along the river.</p> <p>At each Phase of investment the HeatNet 4DHC Team (HvA, UoG, Cerema, Codema, CAP2020) will review and advise on proposals, against 4DHC principles. Investment PPs BsM and Aberdeen will mentor. All decisions will be subject to <u>joint decision making</u> of the HeatNet steering group.</p> <p>Ph1 Feasibility. Preliminary techno-economic design to extend and connect the net towards the Ghent University buildings, &amp; of energy HUB’s at reconversion sites (old hospital and old gas-site). Take account of the 4DHC principles. Ph2 Design. Final pipeline design and routing, &amp; landowner agreements. Procurement of works contractor &amp; ESCO for Design Build Finance Maintain, managed by the DH company. Ph3 Implementation. Installation of pipes and other infrastructure on Campus. Connection of the ‘heat demanding’ buildings on Campus. Installing the smart metering infrastructure.</p>

### Justification

<p>Explain the need for this investment to achieve project objective and results.</p>
<p>This pilot was chosen specifically for HeatNet because Kortrijk are planning a first phase DH development and want to extend and connect more buildings, but face barriers including perceived risks. Kortrijk has already designed &amp; planned the 1st phase DH system, and so can bring this experience to the initial draft HeatNet model. To progress their plans and enable a 4DH approach, this pilot needs the HeatNet model’s guidance on how to convert buildings for 4DH, how to connect disparate hubs, and how to overcome economic risks. When complete, this pilot will deliver efficient, low-carbon heat, and feedback all learnings and experience to further develop the HeatNet model, such as economical and technical feasibility results, testing of flexible heat sources, &amp; results of smart metering. End-users will be municipal and community buildings, with some private in 3rd phase, and will benefit from heat savings</p>



<b>Location of the investment</b>
The pilot will be situated in the centre of Kortrijk on Campus Kortrijk Weide, Magdalenastraat, Kortrijk, close to the river Leie, where several new residential projects are planned in the years to come.
NUTS 3 code
BE254
<b>Ownership</b>
Who owns the site where the investment is located? Who will retain ownership of the investment after the end of the project? Who will take care of maintenance of the investment? How will this be done?
The site for the first part of the pilot is city-owned. And will be managed directly by the service company that is designated by the city itself. Procurement to be started yet. The second part is partly public domain, partly owned by the Province of West-Flanders and the Ghent University. The investment in the extension towards the buildings of the Ghent university buildings will be supported by the Interreg project, but the agreements on who will be the owner of the system is not yet signed. Most probably a third party: being the net-company (Eandis) will manage the heat-net system. The further roll out of the 4DHC will be owned by the different stakeholders (developers, net-owners, city)
<b>Investment documentation</b>
Please list the main technical requirements and permissions (e.g. building permits) required for the investment according to the respective national legislation. Please indicate if they are already available and if not by when they can be expected.
Building permits will be needed, for the first phase (campus Kortrijk Weide) the permits are in procedure and are expected by November 2016. For the second phase (extension towards HoWest, UGent buildings) the permits will be claimed beginning of 2017. Technical requirements for the building of the heat network are detailed already, but not in procurement phase. The more extended net and the HUB's to feed the net along the river Leie are still in the phase of prospection and planning, so all permits and technical requirements remain to be secured
<b>Risks associated with the investment</b>
Description of the risks associated with the official approval of local/regional/national authorities, feasibility study required, procurement process to be applied, linked to the practical implementation phase, etc.
In the first part of our pilot risks are rather small: the investments are in hands of the city and partners. The authorisation to build is acquired and the heat net is incorporated in the planning, but adaptation to 4DHC is required – a small task for this part and low risk. For this first part, the main feasibility study is available. For the extension toward Howest-UGent campus, the calculations are yet to be performed and the business plan is to be developed within the HeatNet project. We anticipate learning from the first stage of implementation and so minimise risks for stage 2.

## Main outputs

Please describe the project main outputs that will be delivered based on the activities carried out in this work package. For each project main output a programme output indicator should be chosen. Please note that they need to have the same measurement unit.				
Project main output	Describe the project main output and its contribution to project sub-objectives	Quantify the contribution	Delivery month	Programme output indicator to which the project main output will contribute. Please check the Programme Manual for the obligatory output indicators.
		0.00	Nov-2019	2.01. Number of solutions facilitating the delivery of existing or emerging low carbon, energy or climate protection strategies

## Target groups

<b>Target groups per main project output</b>	
Who will use the main outputs?	<ul style="list-style-type: none"> <li>• local public authority</li> <li>• higher education and research</li> <li>• education/training centre and school</li> <li>• SME</li> <li>• General public</li> </ul>
How will target groups be involved in the development of the project main outputs?	
All stakeholders in the Campus and related regeneration areas will be involved through engagement and consultation on the general regeneration plans and on detailed proposals for 4DHC, especially concerning building needs for heat, and regarding waste energy resources, at each Phase of the investment WP. Kortrijk, working with Leiedal and UoG and supported by mentors Aberdeen and BSM, will stage consultation events, hold stakeholder interviews, and gather and analyse data from stakeholders. The number of key stakeholders like end-users is limited (City of Kortrijk, Ghent University Campus, swimming pool operator, also real estate developers and other public building owners, district heating operators, potential heat suppliers...). the partner building the swimming pool will be a key player and will be involved in all planning, technical meetings and design of the CHP plant, since it will be installed in the building of the pool (the biggest user of heat))	



## Activities

Please describe activities and deliverables within the work package				
Activity nr	Title		Start month	End month
I4.1	Feasibility: Network extension		Sep-2016	Jul-2017
Feasibility studies for the first installation are already complete, except review for the 4DHC approach, and so this activity focusses on later stages of implementation: the extension of the network towards Ghent University buildings and neighbouring reconversion sites, the route taken etc.				
	Deliverable nr	Title	Target value	End month
	Deliverable I4.1.1	Feasibility study and business case.	1.00	Jun-2017
Studies to inform decisions and future design studies regarding extension of the network to subsequent stages, but also upgrading towards 4DHC with flexible temperature regimes, flexible sources, heating and cooling and interconnection of different HUB's				
	Deliverable I4.1.2	Transnational review of Business Case.	1.00	Jul-2017
4DHC Team and mentors review Business Case against 4DHC principles and provide written summary and recommendations				
I4.2	Design: Technical and design study		Jul-2017	Mar-2018
Technical and design study for the extension of the heat net and connecting the net towards the Ghent University buildings.				
	Deliverable nr	Title	Target value	End month
	Deliverable I4.2.1	Technical study with dossier ready for procurement	1.00	Mar-2018
Report in Dutch with an English summary that contains the technical information that can directly lead to the specifications used for procurement of the dossier.				
	Deliverable I4.2.2	Design study for the installation of the business structure (ESCO or other 'green heat' company model)	1.00	Mar-2018
Report in Dutch with an English summary that contains all legal and economic information to proceed to the installation of the unit.				
I4.3	Implementation: Development of 1,2 HUB's of concentrated heat source/heat demand and creating, according to feasibility studies, the right links between HUB's		Mar-2018	Nov-2019
In the first stage of implementation, Kortrijk will invest in a heat net that will be completely in public hands. This investment will connect the swimming pool, party hall, youth centre and incubation centre for start-ups with a flexible heat net (flexible in direction and flexible in temperature, also extendable). This will deliver the critical mass, and will be the project where all other new opportunities or new projects can learn and see how a heat net can function successfully.				
	Deliverable nr	Title	Target value	End month
	Deliverable I4.3.1	Heat net pipes Stage 1: Campus Kortrijk Weide	1.00	Mar-2019
The installation of heat net pipes of approx. 500m and ancillary equipment				
	Deliverable I4.3.2	Heat network pipes Stage 2: connection towards UoG	1.00	Jun-2019
Installation of heat distribution pipes extended towards the boundary of Campus Kortrijk Weide, future proofed for later extension of the net or interconnection of the HUB's				
	Deliverable I4.3.3	Heat production and management infrastructure	1.00	Aug-2019
Further extension of the heat net, towards the reconversion site that will be developed along the river Leie. With at least one extra energy HUB (production of heat or recovery of heat)				

WP nr	Type	Title	Start month	End month	Budget
WP 15	investment	Heerlen Living Lab	Sep-2016	Nov-2019	1 607 530.04

## Partners involvement

Partner responsible	Mijnwater B.V.
Partners involved	City of Dublin Energy Management Agency Ltd, Codema. Role: LP
	Plymouth City Council, PCC. Role: PP
	CAP 2020, CAP 2020. Role: PP
	University of Gent, UoG. Role: PP
	Amsterdam University of Applied Sciences, HvA. Role: PP
	Mijnwater B.V., Mijnwater . Role: PP
	South Dublin County Council, SDCC. Role: PP
	Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning, CER. Role: PP

## Investment summary

Please provide a description of the investment phases and technical specifications; if several partners are involved please specify who will do what.

Note: Please elaborate if this investment will contribute to a project main output.

The objective of the Heerlen pilot is to move to advanced 4DHC by connecting high temperature industrial waste heat to the existing Heerlen DHC grid. This waste heat will be used for heat demand within a new cluster (called Cluster D) of customers, and support heat to the rest of the city by the existing minewater backbone. This waste heat will reduce the need for electricity for heat pumps, and associated costs and CO2 of electricity. The investment will cover the costs of a cluster energy plant (basement to connect the cluster to the existing backbone), necessary grid extensions and the connection of a multi-functional centre, which will make use of the saved energy. Linked to the high temperature source of waste heat, high temperature storage will be investigated and temperature fluctuation on the grid to enable peak shaving on the connected heat pumps. The grid extension will give example in a new area of the city for new type of customers (industry, individual dwellings). Part of the grid is already established and most customers are in a negotiation phase. At each, the HeatNet 4DHC Team (HvA, UoG, Cerema, Codema, CAP2020) will review and advise on proposals, against 4DHC principles. Investment PPs Plymouth and S. Dublin will mentor. All decisions will be subject to joint decision making of the HeatNet steering group.

Ph 1. Financing, contracting, licensing, initial design of grid, building plants and building modifications.

Ph 2. Program of demands, procurement

Ph 3. Realisation, commissioning.

Mijnwater BV (the energy company of the city) prefers to operate the building plants under its own management.

Thus the highest CO2-reduction, lowest energy consumption and maximum revenues on area level can be reached. Due to Dutch Heat Law the selling prices for DHC support are limited. A healthy business case can only be gained from improving efficiencies and optimizing overall performance.

## Justification

Explain the need for this investment to achieve project objective and results.

This pilot was chosen specifically for HeatNet because Heerlen has already many elements of 4DH systems in place, but is facing high risks and difficulty competing with fossil fuels. As the most experienced DH partner, Heerlen can contribute a lot to the draft HeatNet model, such as how to utilise geothermal heat, using heat pumps with DH, business models and contracting. Heerlen needs the HeatNet model's guidance on how to strengthen business cases to financial institutions, and to establish contracts to supply private households and industry. When this investment is successfully complete, it will deliver low-carbon heat from waste heat sources, lower the costs to customers, and will feedback much needed learnings from the pilot implementation such as how to recover high temperature industrial waste heat, template contracts for all customer types, and how to extend 4DH networks. The end users are public, private and industrial heat consumers benefitting from lower cost heat delivery

<b>Location of the investment</b>
The investments will take place in the Nieuw Lotbroek district to the north west of the city centre.
NUTS 3 code
NL423
<b>Ownership</b>
Who owns the site where the investment is located? Who will retain ownership of the investment after the end of the project? Who will take care of maintenance of the investment? How will this be done?
All infrastructure in public area will be owned by Mijwater BV. The municipality Heerlen is 100% shareholder. If possible we also own (and operate) the building energy plants and installations. Some customers might prefer to own and operate their own building installations. In that case Mijwater acquires building rights for the building energy plants with heat exchangers and monitoring. At end of project, the ownership will remain with Mijwater. Mijwater is re-organizing in 3 companies: consultancy, development and exploitation. The financial risks are posted at the development company. After commissioning the assets are transferred to the exploitation company. This legal entity operates within a healthy business case. The funding will help to enable a competitive transfer (in regardance to cheaper fossil solutions) of the low carbon development to the exploitation company. Mijwater has long term contracts with installers and administrators for maintenance/services.
<b>Investment documentation</b>
Please list the main technical requirements and permissions (e.g. building permits) required for the investment according to the respective national legislation. Please indicate if they are already available and if not by when they can be expected.
Technical Requirements: There are currently no national regulations or legislation for heat networks, and therefore no technical requirements regarding pipeline installation. There are no expectations that these will become available during the project lifetime. Mijwater has his own technical requirements, which are built up in time. All infrastructure elements are subject to Dutch Building Code. Specific topics (e.g. energy performance, legionella) are covered by specific standards (NL-EU). All types of components have already been built by Mijwater in the past. Permissions needed: Planning permission and environmental permit for civil works to install underground pipelines and basements. Has not already been applied for as the final pipeline route has not been defined. This will be applied for after the final pipeline design and route has been chosen by contractor, approximately Q2 Y1
<b>Risks associated with the investment</b>
Description of the risks associated with the official approval of local/regional/national authorities, feasibility study required, procurement process to be applied, linked to the practical implementation phase, etc.
• Planning permissions: Risk Level Low; Mijwater already have an extensive grid in Heerlen • Local/National authorities approval: Risk Level Low • Contractor Procurement: Risk Level low; existing relations and procedures • Energy Services: Risk Level low; Running business for 400 customers • Public acceptance: Risk Level Low • Suitable pipe route: Risk Level Low; well known area • Availability of waste heat: Risk level medium • Geophysical constraint delay: Risk Level low • Legislation Heatplan and heatlaw: Risk Level medium • Customer connections: Risk Level Medium • Medium risk can occur from Dutch Heat Law. If a township has a heatplan, which is political accepted, customers can be obligated to accept a connection on the DHC grid and natural gas connection is not mandatory. The city of Heerlen/Parkstad is still in the process of formulating their plan. This should be accomplished end 2016. Without plan individual customer might refuse a grid connection.

## Main outputs

Please describe the project main outputs that will be delivered based on the activities carried out in this work package. For each project main output a programme output indicator should be chosen. Please note that they need to have the same measurement unit.				
Project main output	Describe the project main output and its contribution to project sub-objectives	Quantify the contribution	Delivery month	Programme output indicator to which the project main output will contribute. Please check the Programme Manual for the obligatory output indicators.
		0.00	Mar-2020	2.01. Number of solutions facilitating the delivery of existing or emerging low carbon, energy or climate protection strategies

**Target groups**

<b>Target groups per main project output</b>	
<b>Who will use the main outputs?</b>	<ul style="list-style-type: none"> <li>• local public authority</li> <li>• infrastructure and (public) service provider</li> <li>• enterprise, excluding SME</li> <li>• SME</li> <li>• General public</li> </ul>
<b>How will target groups be involved in the development of the project main outputs?</b>	
<p>Mijnwater BV works through The Parkstad Limburg regional cooperation (policy to gain CO2-neutrality in 2040) together delivering • creating new business in green technology, where a sustainable energy company is an important development • Topsector Knowledge and Innovation on Energy: input for the national transition to CO2-neutral, main role for heat pumps and DHC • Developing practical know how on innovative energy concepts; also financial, social and legal approach • Open University in Heerlen and University of Applied Sciences "Zuyd Hogeschool" to build a regional expertise centre around 4 DHC • Strategic partners for heat pumps and other components, development of advanced intelligence (monitoring, control) • Maintenance and services by SME, also for adding green technology (like solar PV) into the system • Developing and reinforcing the regional economy, where M€ 500 /a is spent on buying fossils, which can be transferred to local sustainable investments</p>	

## Activities

Please describe activities and deliverables within the work package				
Activity nr	Title		Start month	End month
I5.1	Feasibility: Preparation of works		Sep-2016	Jul-2017
Ph 1. Financing, contracting, licensing, initial design of: grid, building plants and building modifications. For each location energy and capacity needs are determined and combined to sector and cluster specifications. Contracts are closed with individual customers. Licences will be acquired. The draft design of the total area will be made, simulated and optimized for minimal costs, maximum Energy and CO2-saving.				
	Deliverable nr	Title	Target value	End month
	Deliverable 15.1.1	Design and optimization study on Heerlen cluster D DHC grid.	1.00	Jun-2017
	Report by Mijwater and subcontractors. Exchange of expertise within consortium. Presenting an options appraisal and recommendations. Presenting formats for communication, contracting and business case calculation			
	Deliverable 15.1.2	Transnational Review of Business Case	1.00	Jul-2017
	4DHC Team and mentors review Business Case against 4DHC principles and provide written summary and recommendations.			
I5.2	Design: Procurement of works		Jul-2017	Mar-2018
Ph 2. Design, program of demands, procurement The initial feasibility studies will be translated to designs, program of demands and work descriptions for the several planned connections. Comparison of starting points with financial limits, technical options, areal planning, etc. Modifications of plans due to feasibility.				
	Deliverable nr	Title	Target value	End month
	Deliverable 15.2.1	Pre- and final design of infrastructure	1.00	Mar-2018
	Plans and technical description of works to be realised. Flow of for other locations taking examples of technical features and practical know how. Input for HeatNet Model and Evaluation WP.			
	Deliverable 15.2.2	Program of demands for several 4DHC components; KPI's for investments	1.00	Mar-2018
	Report by Mijwater, with input/feedback from expertise within the consortium. Comprising demands, considerations and focus points.			
I5.3	Implementation: Realisation of works		Mar-2018	Nov-2019
Ph 3. Realisation, commissioning Set up of project management and teams of builders, suppliers, consultants and engineers for the sub-projects. The work will be contracted and realised top down from cluster basement to cluster grid to sector basements, sector grids and building plants/installations.				
	Deliverable nr	Title	Target value	End month
	Deliverable 15.3.1	Pre- and definitive designs of the infrastructure and connections.	1.00	Jun-2019
	There will be worked out detailed designs ready for procurement. Underpinning calculations for energy performance, capacities, costs, etc. will be finalised and modifications processed. Lessons learned will be kept up for evaluation and transnational cooperation.			
	Deliverable 15.3.2	Programme of works for realisation of building connections on DHC grid with waste heat and thermal storage	1.00	Nov-2019
	Realisation of technologies: • Clusterbasement • Thermal Buffer • Clusternet Connection to • Backbone • Cluster D • Multifunctional centre			
	Deliverable 15.3.3	Commissioning of network systems	1.00	Nov-2019
	Starting up operation, monitoring, control, administration, billing, service contracts with installers, complaint management, etc. Post completion commissioning will go on during the first year of operation.			

WP nr	Type	Title	Start month	End month	Budget
WP 16	investment	Boulogne sur Mer Living Lab	Sep-2016	Nov-2019	1 183 645.56

## Partners involvement

Partner responsible	City of Boulogne-sur-Mer
Partners involved	City of Dublin Energy Management Agency Ltd, Codema. Role: LP
	CAP 2020, CAP 2020. Role: PP
	City of Kortrijk, Kortrijk. Role: PP
	City of Boulogne-sur-Mer, BsM. Role: PP
	University of Gent, UoG. Role: PP
	Amsterdam University of Applied Sciences, HvA. Role: PP
	Aberdeen City Council, ACC. Role: PP
	Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning, CER. Role: PP

## Investment summary

Please provide a description of the investment phases and technical specifications; if several partners are involved please specify who will do what.

Note: Please elaborate if this investment will contribute to a project main output.

The local planning strategy has identified great development potential & aims to create a dynamic area in the city's southern District, with various new estates, cooling network and extension of the National Sea Centre Nausicaä. Therefore there is high potential for a DHC system where several buildings, namely a swimming pool, laboratories and Nausicaä, need great quantities of heat and cool but also produce loads of energy. Two DHC networks have been completed in 2016 in Boulogne-sur-Mer (BsM) by the city and Habitat du Littoral (HL). Though recent, the full benefits to residents of DHC is not being realised due to the disrepair of secondary networks. Investment in building energy management has been overlooked – a demonstration is needed to show the benefits. To join DHC networks and extend to the new area (waste energy/renewables/cooling network/connections - saving 1200t CO2 pa) raises technical and contractual challenges. HeatNet is needed to find solutions.

**Ph1** Feasibility. New network: Survey on buildings to connect; Preliminary study of possible pipe routes (route length, health and safety issues, traffic disruption); Site investigation (issues on site installation, geology, proximity of river Liane and Sea, environmental issues); Study on the potential of waste energy to be used from Nausicaä. Building energy management: Preliminary studies to assess various ways to improve secondary network; Preliminary studies on potential connection of domestic hot water to DHC. **Ph2** Design. Design and routing (temperature, pressure, heat exchanger sizes, pipeline installation; Review of operational contract; Business Case (including review of impacts on public service delegation)

**Ph3** Implementation. Construction of pipelines, connections. Installation meters/controls for better energy management  
All decisions on this pilot investment will be subject to joint decision making of the HeatNet steering group.

## Justification

Explain the need for this investment to achieve project objective and results.

This pilot was chosen specifically for HeatNet because Boulogne-sur-Mer (BsM) are planning to fight fuel poverty by extending existing DH networks and moving toward 4DHC, but face 4DHC knowledge and finance barriers. This pilot can positively contribute to the initial draft HeatNet Model through its established experience in providing low-carbon heat through recently built DH systems. BsM needs the guidance of the HeatNet model to progress the pilot by creating heat maps, optimising heat resources, demand side efficiency with DH, and integrating district cooling. When complete, this pilot will provide low-carbon low-cost heat to the area, and will feedback important lessons to HeatNet Model such as how to extend existing DH for 4DHC, incorporate district cooling, and improving supply & demand side efficiency. The end users are public sector buildings, but with future potential for businesses, social housing and private housing, and will benefit from expertise and reduced energy bills.

<b>Location of the investment</b>
The investments will be made in the urban area of Boulogne sur Mer, focussing on the river/seafront area.
NUTS 3 code
FR302
<b>Ownership</b>
Who owns the site where the investment is located? Who will retain ownership of the investment after the end of the project? Who will take care of maintenance of the investment? How will this be done?
New network link belongs to the city who will retain ownership after the end of the project. ECOLIANE will take care of maintenance of investment within the frame of the operational contract which will be renegotiated in Ph 2 (regular maintenance and repairs, preventive and remedial maintenance in relation with all stakeholders). Secondary network and meters/controls belong to HL who will retain ownership after the end of the project. DALKIA will take care of maintenance of the investment (activation, adjustments of the secondary network, all repairs in substations, regular checks, and analysis of energy use).
<b>Investment documentation</b>
Please list the main technical requirements and permissions (e.g. building permits) required for the investment according to the respective national legislation. Please indicate if they are already available and if not by when they can be expected.
Technical Requirements : There is no technical requirement per say but ADEME only provides funding when there is more than 50% of renewable energy. Permission needed : - Law on water documentation since the pipeline will be close to the river and sea - Planning permission once the route is known – answer 13 days after request - Private easement in case the future route goes in the private condominiums
<b>Risks associated with the investment</b>
Description of the risks associated with the official approval of local/regional/national authorities, feasibility study required, procurement process to be applied, linked to the practical implementation phase, etc.
Planning permissions: Risk Level Low. Local/National authorities approval: Risk Level Low. Suitable pipe route: Risk Level Low. Geophysical constraint delay: Risk Level low. Procurement/PSD : Risk Level Medium. Disruption to Nausicäa Supply: Risk Level medium. Public acceptance: Risk Level High. Customer connections: Risk Level Medium. A medium level risk has been identified with respect to the financial, legal and technical impact this project will have on the current operational contract. A medium level risk has been identified with respect to Nausicäa end energy supply as Nausicäa is currently being fully renovated to welcome 1 000 000 tourists (today 600 000) and should be delivered in June 2016. The DHC extension depend on this end energy supply and any delay will impact it. A high level risk identified with respect to the private condominiums between current network and Nausicäa. They could refuse suggested route, fear poor DHC efficiency and cost. Owner engagement is planned

## Main outputs

Please describe the project main outputs that will be delivered based on the activities carried out in this work package. For each project main output a programme output indicator should be chosen. Please note that they need to have the same measurement unit.				
Project main output	Describe the project main output and its contribution to project sub-objectives	Quantify the contribution	Delivery month	Programme output indicator to which the project main output will contribute. Please check the Programme Manual for the obligatory output indicators.
		0.00	Nov-2019	2.01. Number of solutions facilitating the delivery of existing or emerging low carbon, energy or climate protection strategies

## Target groups

<b>Target groups per main project output</b>	
Who will use the main outputs?	<ul style="list-style-type: none"> <li>• local public authority</li> <li>• sectoral agency</li> <li>• infrastructure and (public) service provider</li> <li>• SME</li> <li>• General public</li> </ul>
How will target groups be involved in the development of the project main outputs?	
Regular informative meetings will be held with all key stakeholders (the buildings planned to connect to the network). It is crucial for the investment to succeed to have private condominiums located on the future DHC route to be in the right conditions to connect to it, and engagement of owners is planned. All work carried out by HeatNet partners on promoting DHC and on finding incentives to connect will be helpful. Public buildings that will feed into the DHC (waste energy) will be tightly associated to the project through meetings, training and decision process. People connected or about to be connected need to be convinced and trained so that DHC efficiency can be coupled with a better management of energy use.	

## Activities



Please describe activities and deliverables within the work package				
Activity nr	Title		Start month	End month
I6.1	Feasibility: Preliminary study on optimizing energy sources of DHC extension and pipe route options		Sep-2016	Mar-2017
Boulogne-sur-Mer has made great advances recently with DHC, including with innovations in waste heat recovery. It has also identified great potential for 4DHC, utilising waste energy and providing heat and cooling to commercial and residential premises – but only if existing and new networks can be integrated. Studies are required to test feasibility of implementation and essential stakeholders must be engaged and brought into a cooperative structure with a common plan.				
	Deliverable nr	Title	Target value	End month
	Deliverable I6.1.1	Business Case: Capitalise on Available Energy	0.00	Mar-2017
Heat mapping study of energy needs and surpluses and heat optimization potential. Business Case.				
	Deliverable I6.1.2	Best Routes Options for DHC	0.00	Feb-2017
A short report highlighting the methods to select best route option for DHC illustrated with case studies and focussed on particular projects (DHC near sea or river).				
	Deliverable I6.1.3	Agreements to connect	0.00	Mar-2017
Negotiations with building managers regarding connections to the network, resulting in formal Agreements.				
	Deliverable I6.1.4	Transnational Review of Business Case	0.00	Mar-2017
4DHC Team and mentors review Business Case against 4DHC principles and provide written summary and recommendations.				
I6.2	Design 1: Detailed design of primary and secondary network routes and connections, contract negotiations and reviews.		Nov-2016	Jun-2017
Detailed design will specify the routes of network investments, location and specification of connections. Operational contracts, and energy supply contracts will be created, reviewed (to accommodate network extension) and agreed.				
	Deliverable nr	Title	Target value	End month
	Deliverable I6.2.1	Heat supply contracts: serving the network and serving consumers	1.00	Jun-2017
Two categories of contract will be developed: Contracts to supply energy to the network (eg Nausicaä); Contracts to supply energy to buildings. Includes report on lessons learned for energy supply agreements.				
	Deliverable I6.2.2	Technical design report	1.00	Jun-2017
A technical design report will specify technical aspects of the primary and secondary network investments and ancillary equipment.				
I6.3	Design 2: Better Energy Management at the Secondary Network Level.		Nov-2016	Jun-2017
In Boulogne-sur-Mer DHC are not fully efficient due to old secondary networks. A large urban renewal scheme is about to be implemented in a part of the northern district where a DHC has been realised. A study on energy improvement in relation with DHC has to be realised: work improvements? Energy management systems? Sensors? Smart Meters? Possibility to connect domestic hot water to DHC? Options will be tested to demonstrate social benefits for energy bills. Negotiations with residents concerning new heat controls, and procurement of equipment will take place.				
	Deliverable nr	Title	Target value	End month
	Deliverable I6.3.1	Options for improved Energy Use and Management through secondary networks	1.00	Jun-2017
Procure experts. A report specifying improvements to demonstration secondary network, including for heat meters/controls. Based on engagement with residents to understand needs, and training to optimise results of the trial. Evaluation of results.				
I6.4	Implementation: Delivery of improved DHC in Boulogne-sur-Mer		Mar-2017	Nov-2019
Based on all preliminary studies and increased knowledge on DHC thanks to Heatnet Partners, infrastructure work will take place to extend the Southern DHC (Investment 1) and improve secondary networks of the Northern DHC for an overall improvement (Investment 2). A key date is to bear in mind: June 2018 with the delivery of the new extended Nausicaä. Most of the DHC work will have to be carried out with respect to recovering end energy from this building.				
	Deliverable nr	Title	Target value	End month
	Deliverable I6.4.1	Installation of heat distribution infrastructure: connecting networks for 4DHC	1.00	Sep-2019
Installation of insulated underground heat distribution pipes and ancillary equipment.				
	Deliverable I6.4.2	Improved energy management of Buildings connected to DHC	1.00	Sep-2019
Improvements to secondary network made and energy controls installed and commissioned.				

## Workplan summary

WP ID	Type and title	Start date	End date	Budget	Target
<b>WP M</b>	Project management	Sep-2016	Jul-2020	1 108 521.36	
M.1	activity - M.1	Sep-2016	Jul-2020		
M.1.1	deliverable - Project Management Plan and meetings		Jul-2020		6.00
M.1.2	deliverable - Internal communication		Jul-2020		1.00
M.1.3	deliverable - Activity reporting		Jul-2020		6.00
M.2	activity - M.2	Sep-2016	Jul-2020		
M.2.1	deliverable - Financial reports		Jul-2020		6.00
M.3	activity - M.3	Sep-2016	Jul-2020		
M.3.1	deliverable - Quality control		Jul-2020		1.00
M.3.2	deliverable - Risk Management Plan (RMP): development and implementation		Jul-2020		1.00
<b>WP LT</b>	Long Term	Sep-2016	Jan-2020	1 134 100.78	
LT.1	activity - LT.1	Sep-2016	Jan-2020		
LT.1.1	deliverable - Policy, legal and regulatory review. Lead: Energy Cities, with Aberdeen, BsM, Leiedal, Kortrijk, S. Dublin, HvA, CAP2020		Nov-2017		1.00
LT.1.2	deliverable - Spatial policy for 4DHC. Lead: HvA, with Plymouth, BsM, Kortrijk, S. Dublin, Cerema, 7Vents, Leiedal		Jul-2019		1.00
LT.1.3	deliverable - Set of 7 transition Roadmaps, for Dublin, Aberdeen, Plymouth, Boulogne sur Mer, Normandy, Kortrijk, Heerlen. Lead: Leiedal		Mar-2019		7.00
LT.1.4	deliverable - Main output: 4DHC Transition Guide. Lead: Codema, with 7Vents, Leiedal, HvA, Mijnwater, Plymouth, Cerema, UoG		Dec-2019		1.00
LT.2	activity - LT.2	Apr-2017	Oct-2018		
LT.2.1	deliverable - Business Case to Energy sector. Lead: CAP2020, with Aberdeen, Codema, UoG, Energy Cities		Oct-2018		1.00
LT.2.2	deliverable - Business Case to public sector. Lead: Codema, with 7Vents, Plymouth, BsM, Mijnwater, S.Dublin, Kortrijk, CAP2020, Energy Cities		Oct-2018		1.00
LT.2.3	deliverable - Case to energy consumers. Lead: 7Vents, with BsM, Aberdeen, Leiedal, S. Dublin		Oct-2018		1.00
LT.3	activity - LT.3	Sep-2016	Jan-2020		
LT.3.1	deliverable - Roll out strategy. Lead: Codema, with all PPs		Nov-2018		1.00
LT.3.2	deliverable - SME capacity building. Lead: CAP2020, with Energy Cities		Jan-2020		6.00
LT.3.3	deliverable - Capacity building workshops for public authorities. Lead: Energy Cities, with CAP2020, Codema, Cerema, HvA, UoG		Jan-2020		9.00
<b>WP T2</b>	Evaluation	Sep-2016	Oct-2019	532 730.63	
T2.1	activity - T2.1	Sep-2016	Apr-2017		
T2.1.1	deliverable - Evaluation Plan		Apr-2017		1.00
T2.2	activity - T2.2	Apr-2017	Jan-2018		
T2.2.1	deliverable - Recommendations: HeatNet Model		Jan-2018		1.00
T2.3	activity - T2.3	Jan-2018	May-2018		
T2.3.1	deliverable - Case study report cards		May-2018		10.00
T2.3.2	deliverable - Recommendations: HeatNet Model and Transition Roadmaps		May-2018		1.00
T2.3.3	deliverable - Barriers to implementation of 4DHC. Lead: HvA, with All PPs		May-2018		1.00
T2.4	activity - T2.4	Sep-2018	Oct-2019		

T2.4.1	deliverable - Output: GHG reduction targets through 4DHC replication in NWE		Oct-2019		1.00
<b>WP T3</b>	HeatNet Model	Sep-2016	Dec-2019	740 942.96	
T3.1	activity - T3.1	Sep-2016	Dec-2019		
T3.1.1	deliverable - 4DHC project tools. Lead: Cerema, with HvA, Codema, CAP2020, Leiedal, UoG		Dec-2019		3.00
T3.1.2	deliverable - Guidance on integrating 4DHC with energy efficiency retrofitting. Lead: Codema, with CAP2020, 7Vents, Cerema, Aberdeen, S.Dublin		Dec-2019		1.00
T3.1.3	deliverable - 4DHC Procurement Guide. Lead: Energy Cities, with CAP2020, Codema, Kortrijk, BsM		Dec-2019		1.00
T3.1.4	deliverable - 4DHC Technology Guide. Lead UoG, with Mijnwater BV, CAP2020		Dec-2019		1.00
T3.1.5	deliverable - 4DHC Guide to home and building energy management. Lead: 7Vents, with BsM, S.Dublin, Aberdeen		Dec-2019		1.00
T3.1.6	deliverable - 4DHC guide to Governance/Business Models. Lead: CAP2020, with Plymouth, Aberdeen, Leiedal, 7Vents, S.Dublin, BsM, Kortrijk		Dec-2019		1.00
T3.2	activity - T3.2	Sep-2016	Dec-2019		
T3.2.1	deliverable - Guide to financing 4DHC. Lead: Plymouth, with Codema, Mijnwater BV, CAP2020, UoG		Dec-2019		1.00
T3.2.2	deliverable - 4DHC Protocol for ICP. Lead: Plymouth, with Cerema, CAP2020, Mijnwater BV, UoG, Codema		Dec-2019		1.00
T3.3	activity - T3.3	Sep-2016	Dec-2019		
T3.3.1	deliverable - Main Output: HeatNet Model guide. Lead: Cerema, with all PPs		Dec-2019		1.00
<b>WP I1</b>	Plymouth Living Lab	Sep-2016	Nov-2019	1 541 087.91	
I1.1	activity - I1.1	Sep-2016	Jul-2017		
I1.1.1	deliverable - Business Case for the Heat connection to the Plymouth History Centre		Jun-2017		1.00
I1.1.2	deliverable - Business Case for wider city centre heat connections to buildings east and west of Plymouth University's Campus		Jul-2017		1.00
I1.1.3	deliverable - Transnational Review of Business Case		Jul-2017		1.00
I1.2	activity - I1.2	Sep-2016	Mar-2018		
I1.2.1	deliverable - Detailed design and procurement		Mar-2018		1.00
I1.2.2	deliverable - Heat supply agreement and related commercial documentation		Mar-2018		1.00
I1.3	activity - I1.3	Mar-2018	Nov-2019		
I1.3.1	deliverable - Procurement and delivery of the heat connection from the University's Heat Network to the History Centre		Nov-2019		1.00
<b>WP I2</b>	South Dublin Living Lab	Sep-2016	Nov-2019	1 025 426.00	
I2.1	activity - I2.1	Sep-2016	Apr-2017		
I2.1.1	deliverable - Preliminary Study of Options for 4DH site in Tallaght, South Dublin		Apr-2017		1.00
I2.1.2	deliverable - Transnational Review of Options Appraisal		Apr-2017		1.00
I2.2	activity - I2.2	Sep-2016	Mar-2017		
I2.2.1	deliverable - Preliminary Techno-Economic Design Options for 4DH Energy Centre		Mar-2017		1.00
I2.3	activity - I2.3	Apr-2017	Nov-2019		
I2.3.1	deliverable - Procurement and Delivery of Services for Final Site Investigations		Jun-2017		1.00
I2.3.2	deliverable - Procurement of DH Network and Energy Centre (Design Build Operate contract)		Jan-2018		1.00
I2.3.3	deliverable - DH Network Construction and Heat Exchanger Installation		Nov-2019		1.00
<b>WP I3</b>	Aberdeen Living Lab	Sep-2016	Nov-2019	726 347.50	

I3.1	activity - I3.1	Sep-2016	Jul-2017		
I3.1.1	deliverable - Feasibility Study		Jun-2017		1.00
I3.1.2	deliverable - Provide data on energy use and the type of energy contracts which are in place		Jun-2017		1.00
I3.1.3	deliverable - Transnational Review of Business Case		Jul-2017		1.00
I3.2	activity - I3.2	Sep-2016	Mar-2018		
I3.2.1	deliverable - Final design and consents		Mar-2018		1.00
I3.3	activity - I3.3	Mar-2018	Nov-2019		
I3.3.1	deliverable - Procure contractor		Dec-2018		1.00
I3.3.2	deliverable - Installation of mains pipework and ancillaries		Nov-2019		1.00
<b>WP I4</b>	Kortrijk Living Lab	Sep-2016	Nov-2019	1 428 859.50	
I4.1	activity - I4.1	Sep-2016	Jul-2017		
I4.1.1	deliverable - Feasibility study and business case.		Jun-2017		1.00
I4.1.2	deliverable - Transnational review of Business Case.		Jul-2017		1.00
I4.2	activity - I4.2	Jul-2017	Mar-2018		
I4.2.1	deliverable - Technical study with dossier ready for procurement		Mar-2018		1.00
I4.2.2	deliverable - Design study for the installation of the business structure (ESCO or other 'green heat' company model)		Mar-2018		1.00
I4.3	activity - I4.3	Mar-2018	Nov-2019		
I4.3.1	deliverable - Heat net pipes Stage 1: Campus Kortrijk Weide		Mar-2019		1.00
I4.3.2	deliverable - Heat network pipes Stage 2: connection towards UoG		Jun-2019		1.00
I4.3.3	deliverable - Heat production and management infrastructure		Aug-2019		1.00
<b>WP I5</b>	Heerlen Living Lab	Sep-2016	Nov-2019	1 607 530.04	
I5.1	activity - I5.1	Sep-2016	Jul-2017		
I5.1.1	deliverable - Design and optimization study on Heerlen cluster D DHC grid.		Jun-2017		1.00
I5.1.2	deliverable - Transnational Review of Business Case		Jul-2017		1.00
I5.2	activity - I5.2	Jul-2017	Mar-2018		
I5.2.1	deliverable - Pre- and final design of infrastructure		Mar-2018		1.00
I5.2.2	deliverable - Program of demands for several 4DHC components; KPI's for investments		Mar-2018		1.00
I5.3	activity - I5.3	Mar-2018	Nov-2019		
I5.3.1	deliverable - Pre- and definitive designs of the infrastructure and connections.		Jun-2019		1.00
I5.3.2	deliverable - Programme of works for realisation of building connections on DHC grid with waste heat and thermal storage		Nov-2019		1.00
I5.3.3	deliverable - Commissioning of network systems		Nov-2019		1.00
<b>WP I6</b>	Boulogne sur Mer Living Lab	Sep-2016	Nov-2019	1 183 645.56	
I6.1	activity - I6.1	Sep-2016	Mar-2017		
I6.1.1	deliverable - Business Case: Capitalise on Available Energy		Mar-2017		0.00
I6.1.2	deliverable - Best Routes Options for DHC		Feb-2017		0.00
I6.1.3	deliverable - Agreements to connect		Mar-2017		0.00
I6.1.4	deliverable - Transnational Review of Business Case		Mar-2017		0.00
I6.2	activity - I6.2	Nov-2016	Jun-2017		
I6.2.1	deliverable - Heat supply contracts: serving the network and serving consumers		Jun-2017		1.00
I6.2.2	deliverable - Technical design report		Jun-2017		1.00
I6.3	activity - I6.3	Nov-2016	Jun-2017		

I6.3.1	deliverable - Options for improved Energy Use and Management through secondary networks		Jun-2017		1.00
I6.4	activity - I6.4	Mar-2017	Nov-2019		
I6.4.1	deliverable - Installation of heat distribution infrastructure: connecting networks for 4DHC		Sep-2019		1.00
I6.4.2	deliverable - Improved energy management of Buildings connected to DHC		Sep-2019		1.00
<b>WP C</b>	Communication	Sep-2016	Jan-2020	493 993.29	
C.1	activity - C.1	Sep-2016	Jan-2017		
C.1.1	deliverable - Communication strategy		Jan-2017		1.00
C.1.2	deliverable - Dissemination feedback loop		Jan-2017		1.00
C.1.3	deliverable - Communication webinar with communication expert and all project partners		Jan-2017		1.00
C.2	activity - C.2	Sep-2016	Jan-2020		
C.2.1	deliverable - Maintenance and content development of all webpages		Jan-2020		1.00
C.2.2	deliverable - Webinars to promote HeatNet		Jan-2020		9.00
C.3	activity - C.3	Sep-2016	Jan-2020		
C.3.1	deliverable - HeatNet results and publication flyer		Oct-2019		1.00
C.3.2	deliverable - Publications in magazines		Jan-2020		10.00
C.4	activity - C.4	Sep-2016	Jan-2020		
C.4.1	deliverable - Presentations during existing workshops and conferences		Jun-2019		10.00
C.4.2	deliverable - Participants and conclusions of the final HeatNet conference in Brussels		Jan-2020		1.00

## C. PARTNERSHIP

### Who is in the partnership?

Describe the partnership and explain its relevance to achieve the project objective:

- Which types of organisation, from which territory, will be working together?
- How are the roles distributed? Who does that?

The partnership comprises a mix and breadth of key stakeholders in district heating networks. Among public authorities, Municipalities have a dual role of being a significant customer for renewable and low carbon heat, but also having a strategic role in creating the conditions for DH networks to succeed (spatial policy, Partnerships, Finance, etc). Housing providers (e.g Habitat du Littoral, Boulogne s/Mer; Aberdeen City Council), public or non-profit, have a strong interest in DH and are in a position to deliver DH projects. Energy companies, both private (e.g. Dalkia, Boulogne s/Mer) and not for profit (e.g. Aberdeen Heat and Power) manage infrastructure and make operational and investment decisions that influence Transition to 4DHC. These institutions are represented throughout the diverse pilot investments in this project, along with specialist contractors that have the expertise to design, finance and build schemes. Importantly, the project has a broad range of knowledge partners. Their role is to support the pilots investments and to capture learning from the project and package this into transferable guidance to enable replication. The project structure is designed to facilitate and encourage transnational sharing of knowledge and experience. Thus, in-country partnerships between partners (IE - Codema/S Dublin; FR - Cerema/BsM; B - Kortrijk/UoG/Leiedal; UK ACC/AH&P) are augmented through transnational mentoring relationships to gain full value of collective knowledge and experience; BsM+Kortrijk+Aberdeen; Plymouth+Dublin+Mijnwater. A 4DHC Team comprising Cerema, HvA, UoG, Codema and CAP2020 will advise on design and implementation of Investments. Two non-profit partners will provide technical support during the development of local Roadmaps, Leiedal and 7Vents, both being expert in institutional capacity building and stakeholder engagement. Networks, Energy Cities and CAP2020, will engage with public authorities, and SMEs and enterprises to promote HeatNet outputs and to encourage their use and thus the replication of the HeatNet Model for long term dissemination. Investment partners are at widely different stages of transition to 4DHC. This is valuable in enabling us to understand the different routes to 4DHC. There are many starting points and many options, negating a one size fits all approach. This diversity will ensure guidance is fully transferable throughout NWE. The project has a strong focus on evaluation and is adopting a novel approach. Action Research is a cyclical process of 'doing, reviewing, and acting' on lessons learned. This enables transnational experience to be collated and fed back into each investment at key moments as they progress. The investments all follow a 3-phase structure to aid this process. The evaluation team, led by HvA and with Cerema, UoG and CAP2020, will gain an overview of experiences and channel this knowledge into HeatNet outputs. All partners will be involved in the process. There will be evaluation workshops alongside each partner meeting, as well as partner engagement in evaluation of the activities they lead. The Partnership has ability to influence policy through key relationships with Associated partners at local, regional and international level. 4DH Centre, Aalborg will advise, adding credibility and helping to promote outputs widely through its stakeholder and expert networks.

## Strategic concept of the partnership

- What profiles of organisations does the project objective require for an efficient partnership?
- Where are these competencies in North-West Europe?
- How should roles be distributed? Who should do what?

The partnership is widely representative of NWE, representing 6 Member States and many of their different regions. Large and small municipalities are represented, themselves demonstrating a diversity of socio-economic status. Status of partners in relation to DHC is also diverse, some being amongst the most advanced in NWE (e.g. Heerlen/Mijnwater BV) and others yet to make progress in DHC implementation (e.g. Dublin/CODEMA). Public authorities, along with social housing providers (which are also represented in the project), are representative of the substantial public/semi-public market for DHC. It is through institutions of this type that catalytic schemes are most likely to be delivered, and the partnerships brokered that enable transition to 4DHC. Spatial Planning authorities have a key role to play to ensure energy grids are provided and to utilise their powers to ensure development takes place strategically so that energy grids join up and utilise low and zero carbon energy sources. Municipal and community energy agencies, supplying energy and implementing energy efficiency measures bring a commercial supply perspective to the partnership and enable the exploration of tensions between supply-side and demand-side actors, especially in relation to price competition (with fossil fuels/gas grids) and risk management. CAP2020 and associated regional business clusters, and Energy Cities Network and associated EU Heat Coalition provide an extensive network of public authorities and SMEs active in DHC. This provides the foundation of a long-term strategy for dissemination and implementation of project deliverables. Knowledge centres provide complementary expertise in smart city spatial development (Amsterdam University of Applied Sciences), project development and business cases (Cerema), and 4DHC systems (Gent University). Further, they provide vital expertise in analysis and evaluation. Pilot investments will take place in Plymouth, Aberdeen, Boulogne s/mer, Kortrijk, Heerlen, Dublin, engaging a diversity of local actors that will bring additional expertise. This diversity of contexts, actors, business models, risk management approaches, technologies, and scales is a vital aspect of the project. It is from thorough and carefully structured analysis of these cases, led by knowledge partners, that the transnational added value will be secured. The project will be led through the Project Steering Group in which all partners will participate and a dedicated WP leader steering group. Work packages (WPs) will be led by appropriate partners and all partners will participate in each. Thematic working groups will enable a concentrated effort on key issues. Project management and Longterm effect WPs will be led by the lead partner (Codema). Other WPs have been assigned as follows: • Communications: Energy Cities Network • HeatNet Model: Cerema • Evaluation: Amsterdam University of Applied Sciences. Our projected results are based on actual measures (baseline), planned HeatNet investments (end of project), and partner projections based on local plans and studies (5 and 10 year result), assuming no significant barriers. HeatNet aligns with the findings of EU and International reports, in particular District Energy in Cities (2015 UNEP), which specifically highlights the importance of business models and de-risking investments, and the vital role of local governments. HeatNet also connects with other EU wide initiatives promoting energy efficiency investment (ICP). Our strategy builds on previous Interreg projects, including ENO (NWE IIIb, the Minewater Project), GREAT (NWE IVb, business models for smart grid & renewables), MUSIC (NWE IVb, energy transition in urban areas ), ARBOR and BIOenNW (NWE IVb, on energy from biomass), ACE (NWE IVb, smart energy cities). Also Stratego (No.IEE/13/650); EcoHeat4EU; RES H/C SPREAD. In many projects, HeatNet-partners were involved.



## Who is associated to the project and assists the partnership?

If organisations have committed to helping the partnership reach the project objective, describe their competencies and how they will contribute to the project:

- What geographic scope do they cover?
- What political scope, if any, do they have?
- How are they involved in the partnership?

We have made connections with the following strategic organisations and initiatives, through our PPs: The 4DH Research Centre has been developing 4th generation district heating since 2012 as one of the world's largest district heating research projects with expertise of 22 companies related to district heating and 8 universities in Denmark, Sweden, Croatia, and China. The project Heat Roadmap Europe is a part of 4DH and has produced 18 reports since 2012 quantifying the heating and cooling demands in Europe. 4DH will contribute their knowledge of DH in Europe and give advice at the draft stage of key project outputs. HeatNet will exchange data sets from the pilot projects and WP outputs with the 4DH centre. 4DH will attend relevant partner meetings. Heat Network Delivery Unit (HNDU) is part of the UK's Department of Energy and Climate Change (DECC). Its aim is to support Local Authorities through the development stages of heat networks, including heat mapping, energy master planning, feasibility studies and project development. The HNDU has confirmed interest in the HeatNet Model, and will collaborate with Heatnet by sharing its experiences and information of 200 DHC projects with local authorities across the UK. This includes developing the DH market from a delivery and financing perspective. Dublin City Council are one of four local authorities responsible for the Dublin region, responsible for an area of 206km<sup>2</sup> with a population of 527,612 people, including the city centre. The council is in the process of planning a large district heating system linked to a waste incinerator. They will both feed in their findings of the planning and construction process of this system into the Heatnet Model and learn from the more advanced partners in the consortium. There is interest in the project from the highest level of city management. The Amsterdam Economic Board is responsible for the Economic Development of the Amsterdam Metropolitan Area, involving 32 cities in the provinces Noord-Holland and Flevoland. The region has 2.4 m inhabitants (1,1 million households). One of the Board's flagship programme is the multi - stakeholder, multi-year Heat project, in which the Board leads a consortium of 32 parties to reach agreement on the MRA Future Heat Grand Design; in which financing, governance, security of supply, fiscal and legislative implications, business models, offtake agreements and alike are discussed and concluded. This multi-stakeholder process management as well as the learnings are relevant for the HeatNet project. The Board will play an active role in connecting relevant stakeholders and disseminate knowledge developed in the region relevant for the Heatnet. The Investor Confidence Project (ICP) Europe unlocks access to financing for the building renovation market by standardizing how energy efficiency projects are developed, documented and measured. Certification is based on the ICP framework, which assembles best practices and existing technical standards into a set of Protocols that define a clear roadmap for developing projects, determining savings estimates, and documenting and verifying results. In this way project beneficiaries/developers have a standard they can use to source renovation projects they can believe in, and investors achieve reduced due diligence costs thanks to third-party review of each project before certification. The standardized approach to developing projects enables aggregation of projects into high performance portfolios. We have discussed with ICP the potential to bundle HeatNet outputs, along with other existing standards and codes of practice, into a 4DHC project Protocol. This would have the benefit of gaining access for 4DHC projects to an active international investment market. Further, low energy buildings are part of the 4DHC model, so this is a natural and beneficial relationship which we seek to strengthen. We will create further strategic relationships during the project

## Project partners overview

Partner nr	Name of the organisation	Abbreviation	Total ERDF budget	Total budget	Country
1	City of Dublin Energy Management Agency Ltd	Codema	690 253.51	1 150 422.52	IRELAND
2	Plymouth City Council	PCC	1 045 401.35	1 742 335.59	UNITED KINGDOM
3	CAP 2020 asbl	CAP 2020	241 813.10	403 021.84	BELGIQUE-BELGIË
4	Stad Kortrijk	Kortrijk	809 401.50	1 349 002.50	BELGIQUE-BELGIË
5	Intercommunale Leiedal	Leiedal	179 850.00	299 750.00	BELGIQUE-BELGIË
6	Energy Cities	ECN	190 009.50	316 682.50	FRANCE
7	Ville de Boulogne-sur-Mer	BsM	846 293.76	1 410 489.60	FRANCE
8	Universiteit Gent	UoG	210 183.00	350 305.00	BELGIQUE-BELGIË
9	Hogeschool van Amsterdam	HvA	217 089.52	361 815.88	NEDERLAND
10	Les 7 Vents	L7V	215 100.39	358 500.66	FRANCE
11	Aberdeen City Council	ACC	608 485.50	1 014 142.50	UNITED KINGDOM
12	Mijnwater B.V.	Mijnwater	979 147.26	1 631 912.11	NEDERLAND
13	South Dublin County Council	SDCC	564 643.80	941 073.00	IRELAND
14	Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement	CER	116 239.09	193 731.83	FRANCE





## Partner description

Partner number	Partner role in the project	Partner status in the project	
1	LP	Confirmed participation	
Name of organisation in original language	City of Dublin Energy Management Agency Ltd		
Name of organisation in english	City of Dublin Energy Management Agency Ltd		
Abbreviation of organisation	Codema		
Legal status	private		
Profit	Non-profit		
Type of partner	SME		
Main address	Crown Alley, Templebar The Loft, 2 Dublin		
NUTS3 Code	IE021		
Legal representative	Gerald Wardell		
E-mail	gerry.wardell@codema.ie		
Telephone	0035317079818		
Contact person for the application	Declan McCormac		
e-Mail	dec.mccormac@codema.ie		
Telephone	0035317079818		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	82633060		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes		
Partner requested advanced payments	No		
Organisation's core business			
Codema is the Dublin Energy Agency, representing the 4 Dublin local authorities. Codema works closely with all 4 local authorities on all energy related projects in the county. Codema is a not-for-profit limited company. Core competencies include project management, procurement, energy contracting, energy planning and policy, energy systems analysis, building energy management and energy auditing.			
Main role in the project			
Codema is LP and therefore leading the PM WP. Codema is supporting the S.Dublin investment, and leading the studies involved in this investment. Codema is leading the LT WP, leading the roll out strategy and case to the public sector deliverables. Codema will create the Transition Roadmap for Dublin as part of the LT WP. Codema is part of the 4DHC team, giving advice to all partners, involved in developing a guide to mapping in HeatNet Model tools, and involved throughout Evaluation WP.			
Activities in the project			

Partner number	Partner role in the project	Partner status in the project	
2	PP	Confirmed participation	
Name of organisation in original language	Plymouth City Council		
Name of organisation in english	Plymouth City Council		
Abbreviation of organisation	PCC		
Legal status	public		
Profit	Non-profit		
Type of partner	local public authority		
Main address	West Hoe Road Ballard House, PL1 3BJ Plymouth		
NUTS3 Code	UKK41		
Legal representative	David Shepperd		
E-mail	David.Shepperd@plymouth.gov.uk		
Telephone	+441752305403		
Contact person for the application	Alex Midlen		
e-Mail	alex.midlen@plymouth.gov.uk		
Telephone	+44 (0) 1752 304081		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	GB 144 6758 45		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes		
Partner requested advanced payments	No		
Organisation's core business			
Public authority with wide roles and responsibilities for local government, including spatial planning, economic development, social and environmental wellbeing. Includes leadership role in setting and achieving city-wide carbon emission reduction targets. Heat networks are a key element in Plymouth City Council's (PCC) plan for the decarbonisation of heat - 30% by 2020 in its compliance to the national target of an 80% reduction in greenhouse gas emissions by 2050.			
Main role in the project			
PCC will lead its investment and road map, and participate fully in project management and delivery. Specifically, PCC will lead on guidance for financing 4DHC and engagement with ICP and Protocol development. It will work with other partners on Spatial Policies for 4DHC, Barriers, Business models and governance, Roadmapping, Case to Public Sector, Transition Guide. PCC will mentor S Dublin and Mijnwater			
Subpartner 1	Name: University of Plymouth (UoP) Role: University of Plymouth (UoP) is partnering with PCC in the development of the city centre heat network. The design process must include both parties, as does the development of operational options, contractual agreements etc. The main part of the Investment will be delivered by PCC, but work will be required to connect to the UoP campus heat network. Budget: 50 000.00 EUR		
Activities in the project			



Partner number	Partner role in the project	Partner status in the project	
3	PP	Confirmed participation	
Name of organisation in original language	CAP 2020 asbl		
Name of organisation in english	CAP 2020		
Abbreviation of organisation	CAP 2020		
Legal status	private		
Profit	Non-profit		
Type of partner	business support organisation		
Main address	Rue Saucin , 66 5032 Les Isnes		
NUTS3 Code	BE352		
Legal representative	Déborah Depauw		
E-mail	Deborah.depauw@cap2020.be		
Telephone	+32 497 99 77 52		
Contact person for the application	Michel Heukmes		
e-Mail	michel.heukmes@cap2020.be		
Telephone	+32 475 76 57 60		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	898.102.412		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes		
Partner requested advanced payments	No		
Organisation's core business			
CAP 2020 is a cluster of Walloon building industry enterprises: Contractors, Architects, Producers and Suppliers of materials and equipment adopting the 2020 common European objective of massive energy consumption reductions. We have 3 priorities: renovation, eco-district and smart cities.			
Main role in the project			
CAP2020 will lead on Capacity building for SMEs and Governance/Business Models, and Case to the Energy Sector. Contributor to investment reviews. Organize roadshows for enterprises and public authorities, visits of projects and installations. Analyse business models and identify good practice. Disseminate information about public and private markets. Disseminate results to enterprises, public authorities and social housing companies (business models, technologies, financial models...).			
Activities in the project			



Partner number	Partner role in the project	Partner status in the project	
4	PP	Confirmed participation	
Name of organisation in original language	Stad Kortrijk		
Name of organisation in english	City of Kortrijk		
Abbreviation of organisation	Kortrijk		
Legal status	public		
Profit	Non-profit		
Type of partner	local public authority		
Main address	Grote Markt 1, 8500 Kortrijk		
NUTS3 Code	BE254		
Legal representative	Vincent Van Quickenborne		
E-mail	burgemeester@kortrijk.be		
Telephone	+3256278241		
Contact person for the application	Gerda Flo		
e-Mail	Gerda.flo@kortrijk.be		
Telephone	+3256278241		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	BE207494678		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes		
Partner requested advanced payments	No		
Organisation's core business			
City of Kortrijk, delivers a wide range of services to its citizens, numbering 75,000, including spatial planning, and promoting social, economic and environmental wellbeing. Kortrijk wants to initiate and facilitate processes to prepare the implementation of a 4th Generation District Heating (4GDH) in the city center, to start with a pilot project, further roll-out towards the (historic) city center and the new real estate developments. Kortrijk aims at tackling several barriers through developing business cases for setting up 4GDH&C, technical concept for a future-proofed 4GDH, communication, support with stakeholders and end-users, integration with local policies.			
Main role in the project			
Kortrijk will lead a pilot investment and development of a local Transition Roadmap. The city will also work with other partners fully in the Evaluation, identification of Barriers report, Spatial Policy report, Case to public sector, Policy and Regulatory Review, and Procurement Framework, and support the roll out strategy in peer to peer events. Kortrijk will mentor Aberdeen and BSM			
Activities in the project			



Partner number	Partner role in the project	Partner status in the project	
5	PP	Confirmed participation	
Name of organisation in original language	Intercommunale Leiedal		
Name of organisation in english	Intermunicipal Association Leiedal		
Abbreviation of organisation	Leiedal		
Legal status	public		
Profit	Non-profit		
Type of partner	local public authority		
Main address	President Kennedypark 10, 8500 Kortrijk		
NUTS3 Code	BE254		
Legal representative	Filip Vanhaeverbeke		
E-mail	Filip.vanhaverbeke@leiedal.be		
Telephone	+32 56 24 16 16		
Contact person for the application	Dominiek Vandewiele		
e-Mail	Dominiek.Vandewiele@leiedal.be		
Telephone	+32 56 24 16 16		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	BE 0205 350 681		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes		
Partner requested advanced payments	No		
Organisation's core business			
As a regional development agency, Leiedal is partner of local governments in spatial planning, regional development policies, business parks, housing policy, e-government, etc. Leiedal is a very experienced partner in EU and other funded projects. Leiedal has a special interest in spatial energy strategy, integrating 4GDH&C logics into a future-proofed energy system in Kortrijk and region.			
Main role in the project			
Support Kortrijk Roadmap with GIS-energy atlas (qualitative & quantitative demand & supply of energy, spatial development strategies, regional economic development plans, NZEB-renovation strategies, heritage plans...). Lead support to Investment partners on Road mapping. Contribute to Governance/Business Models, Transition Guide, Case to Consumers, HeatNet tools, and Policy & Regulatory Review.			
Activities in the project			



Partner number	Partner role in the project	Partner status in the project	
6	PP	Confirmed participation	
Name of organisation in original language	Energy Cities		
Name of organisation in english	Energy Cities		
Abbreviation of organisation	ECN		
Legal status	private		
Profit	Non-profit		
Type of partner	interest groups including NGOs		
Main address	2 Chemin de Palente , F25000 Besançon		
NUTS3 Code	FR431		
Legal representative	Claire Roumet		
E-mail	claire.roumet@energy-cities.eu		
Telephone	+33381653680		
Contact person for the application	Ian Turner		
e-Mail	ian.turner@energy-cities.eu		
Telephone	+33381653793		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	FR 55379716712		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes		
Partner requested advanced payments	No		
Organisation's core business			
Energy Cities, is a European network representing approximately 1,000 Local Authorities in 30 countries. It has over 20 years of experience in European project coordination and management, communication, dissemination and transfer of experience and know-how on sustainable energy policies and practices across Europe, often through European projects focused on exchange between local authorities. Energy Cities also has experience in developing user friendly municipal-led communication campaigns.			
Main role in the project			
ECN will lead the Longterm WP which will develop an NWE-wide network for exchange of experience and promotion of DHC grids. Armed with tools derived from the project (for spatial analysis and policy, risk management, financial instruments, smart energy grids, governance etc) the network will support a step change in the rate of delivery of DHC in NWE. ECN will manage the project communications and dissemination through publications, seminars, workshops and conferences (eg EU Open Days 2019).			
Activities in the project			

Partner number	Partner role in the project	Partner status in the project	
7	PP	Confirmed participation	
Name of organisation in original language	Ville de Boulogne-sur-Mer		
Name of organisation in english	City of Boulogne-sur-Mer		
Abbreviation of organisation	BsM		
Legal status	public		
Profit	Non-profit		
Type of partner	local public authority		
Main address	Place Godefroy de Bouillon , 62200 Boulogne-sur-Mer		
NUTS3 Code	FR302		
Legal representative	Frédéric CUVILLIER CUVILLIER		
E-mail	ydie.leleu@ville-boulogne-sur-mer.fr		
Telephone	00 33 3 21 87 80 80		
Contact person for the application	Hélène EVRARD-HENON		
e-Mail	h.evrard@habitat-du-littoral.com		
Telephone	+33 3 21 10 04 35		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	FR1X216201608		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Partly	The city does not recover VAT; BUT It benefits from VAT compensation on investment (flexible rate depending on type of investment and year of investment)	
Partner requested advanced payments	No		
Organisation's core business			
The city of Boulogne sur Mer is a local authority whose mission is to answer the needs of the local population. It is responsible inter alia for civil status, urban planning and housing, schools and amenities, cultural, health and welfare and administrative police. Working on DHCs was obvious as a result of its urban planning competence to answer the population's need with respect to heating, air quality and sustainability.			
Main role in the project			
Boulogne-sur-Mer will lead its Investment WP and local Road mapping. It will contribute fully to evaluation and roll out, identification of barriers, and specifically contribute to spatial policy tools, Cases to Public Sector and Consumer, Governance/Business Models, Policy and Regulatory Review and Procurement Framework. It will work with 7Vents and others on Guide to building energy management. BsM will mentor Aberdeen and Kortrijk			
Subpartner 1	Name: Habitat du Littoral Role: HL manages social housing. Both its patrimony and activities are diverse: 4500 collective housings and 1200 individual housings for more than 14 000 tenants i.e. people in social difficulties, private rented sectors, students and elderly. The city of Boulogne-sur-Mer and HL have developed two heat networks powered with alternative energy sources to reduce GHG emissions and decrease heating costs for households. Objectives : - Minimize the impact of price on inhabitants - Work with inhabitants for a better energy management - Incorporate touristic and economic areas Together with other stakeholders : - Work on the role of innovation in business models Budget: 499 893.00 EUR		
Activities in the project			



Partner number	Partner role in the project	Partner status in the project	
8	PP	Confirmed participation	
Name of organisation in original language	Universiteit Gent		
Name of organisation in english	University of Gent		
Abbreviation of organisation	UoG		
Legal status	public		
Profit	Non-profit		
Type of partner	higher education and research		
Main address	Graaf Karel de Goedelaan 5 , 8500 Kortrijk		
NUTS3 Code	BE254		
Legal representative	Prof. dr. Martijn van den Broeck		
E-mail	martijn.vandenbroek@ugent.be		
Telephone	0032 468 12 07 14		
Contact person for the application	Prof. dr. Martijn van den Broeck		
e-Mail	martijn.vandenbroek@ugent.be		
Telephone	0032 468 12 07 14		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	BE 248.015.142		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Partly	For UGent the VAT is partly recoverable. VAT is only recoverable for purchase invoices when these can directly be related to a project with sales invoices that include VAT	
Partner requested advanced payments	No		
Organisation's core business			
UGent is a higher education and research institute and has numerous departments , with relevant competences and experience to tackle barriers for implementation of 4GDH&C: thermodynamics, experience on industrial heat recovery, district heating in housing sector, energy technologies, spatial planning, etc. Power-Link, the energy knowledge platform of Ghent University, addresses current and future energy challenges. UGent's campus Kortrijk is part of the pilot of the city of Kortrijk.			
Main role in the project			
UoG will be a core part of the Evaluation Team, contributing significantly to Evaluation WP. It will support Kortrijk investment. UoG lead 4DHC Technology Guide, provide technical support to Investments, and contribute to all core outputs. It will also contribute to Case to Energy Sector, HeatNet tools, Public Authority capacity building, Finance for 4DHC.			
Activities in the project			





Partner number	Partner role in the project	Partner status in the project	
9	PP	Confirmed participation	
Name of organisation in original language	Hogeschool van Amsterdam		
Name of organisation in english	Amsterdam University of Applied Sciences		
Abbreviation of organisation	HvA		
Legal status	public		
Profit	Non-profit		
Type of partner	higher education and research		
Main address	Weesperzijde 190, 1000BA Amsterdam		
NUTS3 Code	NL326		
Legal representative	Gerard van Haarlem		
E-mail	g.r.m.van.haarlem@hva.nl		
Telephone	+31205951443		
Contact person for the application	Prof.dr. Frank Suurenbroek		
e-Mail	f.suurenbroek@hva.nl		
Telephone	+31621157563		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	815291152B01		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes		
Partner requested advanced payments	No		
Organisation's core business			
The Amsterdam based Amsterdam University of Applied Sciences (HvA) has around 50.000 students and 3.500 staff members. It has two primary processes: higher education and applied research. Prof. dr. Frank Suurenbroek is embedded in the multidisciplinary Research Programs of Urban Technology and Urban management. The program's research focuses on the development and implementation of innovative technology into practice, generally in close cooperation with private firms and public agencies.			
Main role in the project			
Knowledge partner, structuring of transnational learning; and valorisation of the project results by leading Evaluation process and leading all Evaluation WP outputs. Central role in Transition Guide, HeatNet Model Guide, and roll out strategy. Also contributing expertise to spatial policy guide, Policy and Regulatory Review, Public Authority capacity building.			
Activities in the project			



Partner number	Partner role in the project	Partner status in the project	
10	PP	Confirmed participation	
Name of organisation in original language	Les 7 Vents		
Name of organisation in english	7 Vents		
Abbreviation of organisation	L7V		
Legal status	private		
Profit	Non-profit		
Type of partner	SME		
Main address	Rue Gambetta 62A, 50200 COUTANCES		
NUTS3 Code	FR252		
Legal representative	Grégoire BOUCE		
E-mail	gregoire.bouce@7vents.fr		
Telephone	+33 2 33 19 00 10		
Contact person for the application	Florian Guillotte		
e-Mail	florian.guillotte@7vents.fr		
Telephone	+33 2 33 19 01 37		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	FR48480216845		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes		
Partner requested advanced payments	Yes		
Organisation's core business			
Les 7 Vents is a utility cooperative, a social enterprise that deals with energy, climate and sustainable development. We gather organisations and individuals around a not for profit goal. Our members and partners work together to create a sustainable framework for the development of sustainable systems, from micro-economics to heating systems			
Main role in the project			
7Vents will bring its expertise in capacity building and engagement in the energy sector to support partners in Road Mapping, working with Leiedal, and Leading Energy Management in Buildings guide, with a focus on public consumers in leading Case to Consumers, and Energy Efficiency/4DHC integration. In Normandy, 7Vents will undertake Road map studies, involving heat demand mapping, stakeholder engagement, barriers and delivery mechanisms, leading to a Road Map action plan for 4DHC Transition			
Activities in the project			



Partner number	Partner role in the project	Partner status in the project	
11	PP	Confirmed participation	
Name of organisation in original language	Aberdeen City Council		
Name of organisation in english	Aberdeen City Council		
Abbreviation of organisation	ACC		
Legal status	public		
Profit	Non-profit		
Type of partner	local public authority		
Main address	Broad Street Townhouse, AB10 1AQ Aberdeen		
NUTS3 Code	UKM50		
Legal representative	Fraser Bell		
E-mail	frbell@aberdeencity.gov.uk		
Telephone	01224 522084		
Contact person for the application	Amye Robinson		
e-Mail	ARobinson@aberdeencity.gov.uk		
Telephone	01224 522084		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	663 726613		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes		
Partner requested advanced payments	No		
Organisation's core business			
Aberdeen City Council is a Scottish Local Authority situated in the North East of Scotland. Our vision for Aberdeen is to be an ambitious, achieving, smart city and we will ensure all citizens are encouraged and supported to make their full contribution. ACC has a wider range of spatial planning and wellbeing responsibilities. Aberdeen Heat & Power was established by ACC to operate DHC networks.			
Main role in the project			
ACC will lead delivery of its investment and roadmap, and contribute fully to the Evaluation WP. Specifically it will contribute to spatial policy tools, Transition Guide, Case to Energy sector and Consumers, Governance/Business Models guide, Policy and Regulatory Review, Energy Efficiency/ 4DHC integrations, and Energy Management in Buildings guide. ACC will mentor BsM and Kortrijk			
Subpartner 1	Name: Aberdeen Heat and Power Role: To provide technical support and advise on feasibility/viability of options. Contribute to delivery planning. Budget: 44 400.00 EUR		
Activities in the project			



Partner number	Partner role in the project	Partner status in the project	
12	PP	Confirmed participation	
Name of organisation in original language	Mijnwater B.V.		
Name of organisation in english	Mijnwater B.V.		
Abbreviation of organisation	Mijnwater		
Legal status	private		
Profit	Non-profit		
Type of partner	SME		
Main address	Valkenburgerweg 177, 6419 AT Heerlen		
NUTS3 Code	NL423		
Legal representative	C.L.M. Hiddes		
E-mail	c.hiddes@mijnwater.com		
Telephone	+31628248548		
Contact person for the application	Herman Eijdem		
e-Mail	h.eijdem@mijnwater.com		
Telephone	+31628248548		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	8531.90.008.B.01		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes		
Partner requested advanced payments	No		
Organisation's core business			
Mijnwater BV is the operating company of the Municipality of Heerlen to develop, exploit and innovate the low-exergy DHC-grid based on shallow geothermal energy. The Mijnwater project originated from a Interreg IIIb pilot and is developed to supply heat and cold to 150.000 m2 building area. Mijnwater has a mission to substantially contribute to the ambition of the region to become energy neutral.			
Main role in the project			
Mijnwater will lead its investment and roadmap study, and mentor partners S Dublin and Plymouth. It will make a full contribution to evaluation and main project outputs. Also contribute to Transition Guide, Case to Public Sector, 4DHC Technology Guide, Finance for 4DHC. Mijnwater is the most advanced 4DHC practitioner in the project and their expertise will play a central role in determining routes and goals for transition.			
Activities in the project			

Partner number	Partner role in the project	Partner status in the project	
13	PP	Confirmed participation	
Name of organisation in original language	South Dublin County Council		
Name of organisation in english	South Dublin County Council		
Abbreviation of organisation	SDCC		
Legal status	public		
Profit	Non-profit		
Type of partner	local public authority		
Main address	County Architects, County Hall, Tallaght , D24 Dublin		
NUTS3 Code	IE021		
Legal representative	Eddie Conroy		
E-mail	econroy@sdccco.ie		
Telephone	0035314149000		
Contact person for the application	Eddie Conroy		
e-Mail	econroy@sdccco.ie		
Telephone	0035314149000		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	9509809p		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No		
Partner requested advanced payments	No		
Organisation's core business			
South Dublin County Council are the public sector local authority for the municipality area of South Dublin. The municipality area has a population of 265,205 with a total housing stock of nearly 100,000. The council's main responsibility is the governance of services for the municipality area. The council are part of the Covenant of Mayors cities and have committed to 20% emission reductions by 2020.			
Main role in the project			
SDCC will lead for S Dublin investment, working closely with Codema on this pilot, and with the 4DHC team for advice throughout. SDCC will be involved throughout the Evaluation WP, giving interviews, KPIs and feedback on all pilot activities. SDCC will contribute to the LT WP helping Codema to create the Dublin Transition Roadmap & disseminate all HeatNet outputs locally. Also contribute to: Governance and Business Cases, Policy reviews/tools, EE/4DHC Integration. Mentoring PCC and Mijwater			
Activities in the project			



Partner number	Partner role in the project	Partner status in the project	
14	PP	Confirmed participation	
Name of organisation in original language	Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement		
Name of organisation in english	Centre for studies and expertise on Risks, Environment, Mobility, and Urban and Country Planning		
Abbreviation of organisation	CER		
Legal status	public		
Profit	Non-profit		
Type of partner	local public authority		
Main address	Rue Jean BART, CS20275 4 ter, 59019 LILLE		
NUTS3 Code	FR301		
Legal representative	Stéphane COUDERT		
E-mail	stephane.coudert@cerema.fr		
Telephone	003320496000		
Contact person for the application	Sébastien DELHOMELLE		
e-Mail	Sebastien.delhomelle@cerema.fr		
Telephone	003320496000		
Co-financing source	ERDF	Co-financing rate (%)	60.00
VAT number	FR94130018310		
Is the organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Partly	Only one part of the cerema's work are for concurential sector, the other one is for the French environment ministry	
Partner requested advanced payments	No		
Organisation's core business			
Placed under the joint supervision of the french ministry for Ecology, Sustainable Development and Energy and the french ministry for Regional Equality and Housing, Cerema is a resource centre for scientific and technical expertise, in support of the definition, implementation and evaluation of public policies, carried by national and local authorities. The Cerema has a great experience in research projects enhancement, being involved in production, expertise and test activities.			
Main role in the project			
Cerema will Lead the HeatNet Model WP and non technical guide to 4DHC - produce a tool to compare, from an economic point of view, DHC with conventional heating solutions, Develop ( with Codema) a heat mapping tool, Provide a bilateral support to BsM. Cerema provides core contribution to Evaluation WP, and contributes to spatial tools, Policy and Regulatory Review, Transition Guide, Energy Efficiency/4DHC integration guide, Public Authority capacity building, 4DHC Finance guide.			
Activities in the project			

## D. Partner Budget

<b>Name of partner organisation</b>	City of Dublin Energy Management Agency Ltd
<b>Partner ID</b>	1
<b>Legal status</b>	private
<b>Type of partner</b>	SME
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

Partner Budget		
	Amount	Co-financing Rate
<b>Programme co-financing</b>	690 253.80	60.00
<b>Partner contribution</b>	460 168.72	
<b>Partner total eligible budget</b>	1 150 422.52	

Origin of partner contribution (indicative)			
Source of contribution	Legal status	% of total partner contribution	Amount
City of Dublin Energy Management Agency Ltd	private	100.00 %	460 169.01
Sub-total public contribution		0.00 %	0.00
Sub-total private contribution		100.00 %	460 169.01
<b>Total</b>		%	460 169.01
<b>Partner total target value</b>			460 168.72

In-kind contribution	
Is there any in-kind contribution included in the project budget for this partner?	no

### Partner budget - breakdown per budget line (indicative)

Staff costs	
Are you using the flat rate for staff costs?	No
Project management - WPM	495 900.00
Long Term - WPLT	128 250.00
Evaluation - WPT2	22 800.00
HeatNet Model - WPT3	62 700.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	96 900.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	45 600.00
<b>Total:</b>	852 150.00

Staff costs			Project management - WPM			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	2 Full Time Equivalent Project Manager, Project Co-Ordinator, Financial and Communications Manager @ a monthly rate of €5,700 each	month	Period 1	6.00	5 700.00	34 200.00
	2 Full Time Equivalent Project Manager, Project Co-Ordinator, Financial and Communications Manager @ a monthly rate of €5,700 each	month	Period 2	24.00	5 700.00	136 800.00
	2 .08 Full Time Equivalent Project Manager, Project Co-Ordinator, Financial and Communications Manager @ a monthly rate of €5,700 each	month	Period 3	25.00	5 700.00	142 500.00
	2.5 Full Time Equivalent Project Manager, Project Co-Ordinator, Financial and Communications Manager @ a monthly rate of €5,700 each	month	Period 4	32.00	5 700.00	182 400.00
					<b>Total</b>	<b>495 900.00</b>

Staff costs			Long Term - WPLT			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time		month	Period 1	1.00	0.00	0.00
	Creation of the South Dublin 4DHC Transition Roadmap, which involves 4DH feasibility studies. Report.	month	Period 2	1.00	5 700.00	5 700.00
	Help to create business models which are attractive for ESCo's & energy sector and public sector. Creation of rollout strategy for HeatNet replication. Creation of business case for LAs, incl. risk minimisation tools, and case studies of existing models.	month	Period 3	10.00	5 700.00	57 000.00
	A how-to guide to making a transition roadmap to 4DHC, what needs to be analysed, how to implement etc.	month	Period 4	11.50	5 700.00	65 550.00
					<b>Total</b>	<b>128 250.00</b>

Staff costs			Evaluation - WPT2			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time		month	Period 1	1.00	0.00	0.00
	Feedback to Amsterdam on Pilot activities and establishing KPIs for the SDCC pilot	month	Period 2	2.00	5 700.00	11 400.00
		month	Period 3	0.00	5 700.00	0.00
	Feedback to Amsterdam on Pilot activities and establishing KPIs for the SDCC pilot	month	Period 4	2.00	5 700.00	11 400.00
					<b>Total</b>	<b>22 800.00</b>

Staff costs			HeatNet Model - WPT3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time		month	Period 1	1.00	0.00	0.00
		month	Period 2	1.00	0.00	0.00
	Input into content of guide; 4DHC design, finance, operational characteristics	month	Period 3	5.00	5 700.00	28 500.00
	Input into non-technical guide, creation of mapping guide with Amsterdam & Cerema. Input into content of guide; 4DHC design, finance, operational characteristics . Guide on Integrating Energy Efficiency and 4DHC	month	Period 4	6.00	5 700.00	34 200.00
					<b>Total</b>	<b>62 700.00</b>



Staff costs			Plymouth Living Lab - WPI1			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
			Period 1	1.00	0.00	0.00
			Period 4	1.00	0.00	0.00
			Period 2	1.00	0.00	0.00
			Period 3	1.00	0.00	0.00
					<b>Total</b>	<b>0.00</b>

Staff costs			South Dublin Living Lab - WPI2			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time		month	Period 1	1.00	0.00	0.00
	Preliminary Study of Options for 4DH site in Tallaght, South Dublin .	month	Period 2	5.00	5 700.00	28 500.00
	Preliminary Techno-Economic Design Options for 4DH Energy Centre Procurement and Delivery of Services for Final Site Investigations,	month	Period 3	6.00	5 700.00	34 200.00
	Procurement and Delivery of Services for Final Site Investigations, DH Network Construction and Heat Exchanger Installation. Procurement of Services for DH Energy Centre	month	Period 4	6.00	5 700.00	34 200.00
					<b>Total</b>	<b>96 900.00</b>

Staff costs			Aberdeen Living Lab - WPI3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
			Period 4	1.00	0.00	0.00
			Period 1	1.00	0.00	0.00
			Period 2	1.00	0.00	0.00
			Period 3	1.00	0.00	0.00
					<b>Total</b>	<b>0.00</b>

Staff costs			Kortrijk Living Lab - WPI4			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
			Period 4	1.00	0.00	0.00
			Period 1	1.00	0.00	0.00
			Period 2	1.00	0.00	0.00
			Period 3	1.00	0.00	0.00
					<b>Total</b>	<b>0.00</b>

Staff costs			Heerlen Living Lab - WPI5			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
			Period 4	1.00	0.00	0.00
			Period 1	1.00	0.00	0.00
			Period 2	1.00	0.00	0.00
			Period 3	1.00	0.00	0.00
					<b>Total</b>	<b>0.00</b>

Staff costs			Boulogne sur Mer Living Lab - WPI6			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
			Period 4	1.00	0.00	0.00
			Period 1	1.00	0.00	0.00
			Period 2	1.00	0.00	0.00
			Period 3	1.00	0.00	0.00
					<b>Total</b>	<b>0.00</b>

Staff costs			Communication - WPC			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	Input into Comms Strategy & ensuring strategy clearly outlines publicity requirements by INTERREG	month	Period 1	1.00	5 700.00	5 700.00
	Contributing to bulletin board, reporting on progress of comms tasks and liaising with WP leader. Participation in webinar and provide input to final adjustment of comms strategy	month	Period 2	2.00	5 700.00	11 400.00
	Regularly updating content on Codema's website and providing content for INTERREG page, regularly contribute to social media accounts. Participate in EU webinars & help organise national/English language webinars. Provide input into content of publications	month	Period 3	2.00	5 700.00	11 400.00
	Assist WP leader with organisation, promote final conference locally and publicise project.	month	Period 4	3.00	5 700.00	17 100.00
					<b>Total</b>	<b>45 600.00</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	74 385.00
Long Term - WPLT	19 237.50
Evaluation - WPT2	3 420.00
HeatNet Model - WPT3	9 405.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	14 535.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	6 840.00
<b>Total:</b>	<b>127 822.50</b>

Travel and accommodation		Project management - WPM				
Description	Unit type	Period	No. of units	Price per unit	Total	
		Period 1	0.00	0.00	0.00	
2 Staff members for 2 partner meetings @ 600 per Staff Member 2 Staff Members for Aalborg @ 500 per staff member for 1 meeting		Period 2	6.00	566.67	3 400.02	
2 Staff members for 2 partner meetings @ 600 per Staff Member 2 Staff Members for Aalborg @ 500 per staff member for 2 meetings		Period 3	8.00	550.00	4 400.00	
2 Staff members for 2 partner meetings @ 600 per Staff Member 2 Staff Members for Aalborg @ 500 per staff member for 2 meetings		Period 4	8.00	550.00	4 400.00	
					<b>Total</b>	<b>12 200.02</b>

Travel and accommodation		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
6 Partner / Observer visits and 4 study trip travel expenses @ 600 euro per person. 10 people in total		Period 4	10.00	600.00	6 000.00
				<b>Total</b>	<b>6 000.00</b>

Travel and accommodation		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Travel and accommodation		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Travel and accommodation		Plymouth Living Lab - WPI1			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Travel and accommodation		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
1 Kick-off Partner Meeting in Dublin	Partner Meeting	Period 1	1.00	5 000.00	5 000.00
2 FLC audits for LP and 2 FLC audits for Partnership at a global level		Period 2	4.00	750.00	3 000.00
2 FLC audits for LP and 2 FLC audits for Partnership at a global level		Period 3	4.00	750.00	3 000.00
2 FLC audits for LP and 2 FLC audits for Partnership at a global level and a spot check at circa €2,000		Period 4	5.00	1 000.00	5 000.00
				<b>Total</b>	<b>16 000.00</b>

External expertise and services		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
Expert support to develop the HeatNet Model into standards/protocols within the ICP framework for Energy Efficiency Investment tools @ €50k Creation of business case for LA's and delivery of training locally @ €5k		Period 4	55.00	1 000.00	55 000.00
				<b>Total</b>	<b>55 000.00</b>

External expertise and services		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Plymouth Living Lab - WPI1			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		South Dublin Living Lab - WPI2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
2 Procurement Advice days @ €800 and 5 Feasability Consultation days @ 800		Period 2	7.00	800.00	5 600.00
2 Procurement Advice days @ €800 and 5 Feasability Consultation days @ 800		Period 3	7.00	800.00	5 600.00
1 Procurement Advice day @ €800 and 2.5 Feasability Consultation days @ 800		Period 4	3.50	800.00	2 800.00
				<b>Total</b>	<b>14 000.00</b>

External expertise and services		Aberdeen Living Lab - WPI3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Kortrijk Living Lab - WPI4			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Heerlen Living Lab - WPI5			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Boulogne sur Mer Living Lab - WPI6			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
Digital Promotion of HeatNet local actions, Advertising of HeatNet in specialised publication, Local seminar on DH, Design of promotional case study / brochure, Printing.		Period 3	5.00	1 750.00	8 750.00
Translation Costs for Partnership 5 reports & Final Conference @ €20k Final conference cost @ €20k Design and Print costs for 5 reports @ €18.5k. HeatNet Results, Evaluation Report, Transition Roadmap, 4DHC Non-Technical Guide, HeatNet Model Guide		Period 4	8.00	7 312.50	58 500.00
				<b>Total</b>	<b>67 250.00</b>

Equipment		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Equipment		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		Plymouth Living Lab - WPI1			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Net Revenue		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Net Revenue		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	Plymouth City Council
<b>Partner ID</b>	2
<b>Legal status</b>	public
<b>Type of partner</b>	local public authority
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

<b>Partner Budget</b>		
	<b>Amount</b>	<b>Co-financing Rate</b>
<b>Programme co-financing</b>	1 045 401.60	60.00
<b>Partner contribution</b>	696 933.99	
<b>Partner total eligible budget</b>	1 742 335.59	

<b>Origin of partner contribution (indicative)</b>			
<b>Source of contribution</b>	<b>Legal status</b>	<b>% of total partner contribution</b>	<b>Amount</b>
Plymouth City Council	public	100.00 %	696 934.24
Sub-total public contribution		100.00 %	696 934.24
Sub-total private contribution		0.00 %	0.00
<b>Total</b>		<b>%</b>	<b>696 934.24</b>
<b>Partner total target value</b>			<b>696 933.99</b>

<b>In-kind contribution</b>	
Is there any in-kind contribution included in the project budget for this partner?	no

**Partner budget - breakdown per budget line (indicative)**

<b>Staff costs</b>	
Are you using the flat rate for staff costs?	Yes
Flat rate amount:	20.00
Project management - WPM	2 015.20
Long Term - WPLT	16 500.00
Evaluation - WPT2	0.00
HeatNet Model - WPT3	14 208.00
Plymouth Living Lab - WPI1	250 583.40
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	0.00
<b>Total:</b>	<b>283 306.60</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	302.28
Long Term - WPLT	2 475.00
Evaluation - WPT2	0.00
HeatNet Model - WPT3	2 131.20
Plymouth Living Lab - WPI1	37 587.51
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	0.00
<b>Total:</b>	<b>42 495.99</b>

Travel and accommodation		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
average cost for a two day, two night visit to a partner region for two people		Period 1	1.00	1 268.00	1 268.00
average cost for a two day, two night visit to a partner region for two people		Period 2	2.00	1 268.00	2 536.00
average cost for a two day, two night visit to a partner region for two people		Period 3	2.00	1 268.00	2 536.00
average cost for a two day, two night visit to a partner region for two people		Period 4	2.00	1 268.00	2 536.00
				<b>Total</b>	<b>8 876.00</b>

Travel and accommodation		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
Travel costs included in Project Management WP budget		Period 1	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 2	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 3	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Travel and accommodation		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
Travel costs included in Project Management WP budget		Period 1	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 2	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 3	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>



Travel and accommodation		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
visit to partners to access knowledge on 4DHC networks and related business models		Period 2	2.00	634.00	1 268.00
visit to partners to access knowledge on 4DHC networks and related business models		Period 3	2.00	634.00	1 268.00
visit to partners to access knowledge on 4DHC networks and related business models		Period 4	2.00	634.00	1 268.00
				<b>Total</b>	<b>3 804.00</b>

Travel and accommodation		Plymouth Living Lab - WPI1			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Travel and accommodation		South Dublin Living Lab - WPI2			
Description	Unit type	Period	No. of units	Price per unit	Total
Travel costs included in Project Management WP budget		Period 1	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 2	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 3	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Travel and accommodation		Aberdeen Living Lab - WPI3			
Description	Unit type	Period	No. of units	Price per unit	Total
Travel costs included in Project Management WP budget		Period 1	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 2	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 3	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Travel and accommodation		Kortrijk Living Lab - WPI4			
Description	Unit type	Period	No. of units	Price per unit	Total
Travel costs included in Project Management WP budget		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 3	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Travel and accommodation		Heerlen Living Lab - WPI5			
Description	Unit type	Period	No. of units	Price per unit	Total
Travel costs included in Project Management WP budget		Period 1	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 2	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 3	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Travel and accommodation		Boulogne sur Mer Living Lab - WPI6			
Description	Unit type	Period	No. of units	Price per unit	Total
Travel costs included in Project Management WP budget		Period 1	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 2	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 3	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Travel and accommodation		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
Travel costs included in Project Management WP budget		Period 1	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 2	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 3	1.00	0.00	0.00
Travel costs included in Project Management WP budget		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
total of contract payments expected for: Heat masterplan for the city from 4DHC perspective; New housing heat network study to provide policy evidence		Period 2	1.00	41 250.00	41 250.00
total of contract payments expected for: Heat masterplan for the city from 4DHC perspective; New housing heat network study to provide policy evidence		Period 3	1.00	41 250.00	41 250.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>82 500.00</b>

External expertise and services		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Total contract payments expected for: 4DHC Heat masterplanning study, citywide; Re-evaluation of DHC project with HeatNet Model; 4DHC feasibility study for Energy from Waste Plant.		Period 2	1.00	33 618.00	33 618.00
Total contract payments expected for: 4DHC Heat masterplanning study, citywide; Re-evaluation of DHC project with HeatNet Model; 4DHC feasibility study for Energy from Waste Plant.		Period 3	1.00	33 618.00	33 618.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>67 236.00</b>

External expertise and services		Plymouth Living Lab - WPI1			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Costs for: Project Development including business case, commercial model, procurement strategy and support; Client Engineer Role, pre- & construction period; Procurement Specification & Contract Documentation; Legal support for Commercial Agreement		Period 2	1.00	39 825.00	39 825.00
Costs for: Project Development including business case, commercial model, procurement strategy and support; Client Engineer Role, pre- & construction period; Procurement Specification & Contract Documentation; Legal support for Commercial Agreement		Period 3	1.00	39 825.00	39 825.00
Costs for: Project Development including business case, commercial model, procurement strategy and support; Client Engineer Role, pre- & construction period; Procurement Specification & Contract Documentation; Legal support for Commercial Agreement		Period 4	1.00	19 912.00	19 912.00
				<b>Total</b>	<b>99 562.00</b>

External expertise and services		South Dublin Living Lab - WPI2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Aberdeen Living Lab - WPI3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Kortrijk Living Lab - WPI4			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Heerlen Living Lab - WPI5			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Boulogne sur Mer Living Lab - WPI6			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Equipment		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
Computer for project coordinator		Period 1	1.00	1 200.00	1 200.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>1 200.00</b>

Infrastructure and works		Plymouth Living Lab - WPI1			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
Cost of contracts for District Heat network installation. Energy Centre works History Centre network and connection Of which control equipment for energy centre works €87,655.		Period 3	1.00	230 671.00	230 671.00
Remainder of cost of contracts for District Heat network installation. Energy Centre works History Centre network and connection		Period 4	1.00	922 684.00	922 684.00
				<b>Total</b>	<b>1 153 355.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	CAP 2020 asbl
<b>Partner ID</b>	3
<b>Legal status</b>	private
<b>Type of partner</b>	business support organisation
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

Partner Budget		
	Amount	Co-financing Rate
<b>Programme co-financing</b>	241 813.20	60.00
<b>Partner contribution</b>	161 208.64	
<b>Partner total eligible budget</b>	403 021.84	

Origin of partner contribution (indicative)			
Source of contribution	Legal status	% of total partner contribution	Amount
CAP 2020 asbl	private	25.00 %	40 302.18
Walloon Region	public	75.00 %	120 906.56
Sub-total public contribution		75.00 %	120 906.56
Sub-total private contribution		25.00 %	40 302.18
<b>Total</b>		<b>%</b>	<b>161 208.74</b>
Partner total target value			161 208.64

In-kind contribution	
Is there any in-kind contribution included in the project budget for this partner?	no

#### Partner budget - breakdown per budget line (indicative)

Staff costs	
Are you using the flat rate for staff costs?	No
Project management - WPM	23 782.50
Long Term - WPLT	93 330.00
Evaluation - WPT2	44 167.50
HeatNet Model - WPT3	84 937.50
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	28 645.00
<b>Total:</b>	<b>274 862.50</b>

Staff costs			Project management - WPM			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Part time with a fixed percentage	1 person months at 6795 euro month (walloon calculation basis) administrative and financial support	month	Period 1	0.50	6 795.00	3 397.50
	1 person months at 6795 euro month (walloon calculation basis) administrative and financial support	month	Period 2	1.00	6 795.00	6 795.00
	1 person months at 6795 euro month (walloon calculation basis) administrative and financial support	month	Period 3	1.00	6 795.00	6 795.00
	1 person months at 6795 euro month (walloon calculation basis) administrative and financial support	month	Period 4	1.00	6 795.00	6 795.00
					<b>Total</b>	<b>23 782.50</b>

Staff costs			Long Term - WPLT			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Part time with a fixed percentage	"1 person months at 6795 euro month (walloon calculation basis), recommendations, EU Energy Market, procurement framework and finance protocols with Energy Cities, peer to peer networking events, guide to making transition roadmaps ... "	month	Period 1	1.00	0.00	0.00
	"1 person months at 6795 euro month (walloon calculation basis), recommendations, EU Energy Market, procurement framework and finance protocols with Energy Cities, peer to peer networking events, guide to making transition roadmaps ... "	month	Period 2	2.00	6 795.00	13 590.00
	"1 person months at 6795 euro month (walloon calculation basis), recommendations, EU Energy Market, procurement framework and finance protocols with Energy Cities, peer to peer networking events, guide to making transition roadmaps ... "	month	Period 3	4.50	6 795.00	30 577.50
	"1 person months at 6795 euro month (walloon calculation basis), recommendations, EU Energy Market, procurement framework and finance protocols with Energy Cities, peer to peer networking events, guide to making transition roadmaps ... "	month	Period 4	4.50	10 925.00	49 162.50
					<b>Total</b>	<b>93 330.00</b>

Staff costs			Evaluation - WPT2			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Part time with a fixed percentage	"1 person months at 6795 euro month (walloon calculation basis), business cases, legislative and regulatory review, identify market opportunities for SMEs "	month	Period 1	0.50	6 795.00	3 397.50
	"1 person months at 6795 euro month (walloon calculation basis), business cases, legislative and regulatory review, identify market opportunities for SMEs "	month	Period 2	2.00	6 795.00	13 590.00
	"1 person months at 6795 euro month (walloon calculation basis), business cases, legislative and regulatory review, identify market opportunities for SMEs "	month	Period 3	2.00	6 795.00	13 590.00
	"1 person months at 6795 euro month (walloon calculation basis), business cases, legislative and regulatory review, identify market opportunities for SMEs "	month	Period 4	2.00	6 795.00	13 590.00
					<b>Total</b>	<b>44 167.50</b>

Staff costs			HeatNet Model - WPT3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Part time with a fixed percentage	"1 person months at 6795 euro month (walloon calculation basis), develop procurement framework and finance protocols , legislative and regulatory review and recommendations, database of companies, identify market opportunities for SMEs. "	month	Period 1	0.50	6 795.00	3 397.50
	"1 person months at 6795 euro month (walloon calculation basis), develop procurement framework and finance protocols , legislative and regulatory review and recommendations, database of companies, identify market opportunities for SMEs. "	month	Period 2	4.50	6 795.00	30 577.50
	"1 person months at 6795 euro month (walloon calculation basis), develop procurement framework and finance protocols , legislative and regulatory review and recommendations, database of companies, identify market opportunities for SMEs. "	month	Period 3	4.50	6 795.00	30 577.50
	"1 person months at 6795 euro month (walloon calculation basis), develop procurement framework and finance protocols , legislative and regulatory review and recommendations, database of companies, identify market opportunities for SMEs. "	month	Period 4	3.00	6 795.00	20 385.00
					<b>Total</b>	<b>84 937.50</b>

Staff costs			Communication - WPC			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
			Period 1	1.00	0.00	0.00
Part time with a fixed percentage	1 person months at 6795 euro month (walloon calculation basis) communication tools, events organisation, definition of training program and organisation	month	Period 2	1.00	6 795.00	6 795.00
	2 persons months at 6795 euro and 4130 month (walloon calculation basis)communication tools, events organisation, definition of training program and organisation	month	Period 3	1.00	10 925.00	10 925.00
	2 persons months at 6795 euro and 4130 month (walloon calculation basis)communication tools, events organisation, definition of training program and organisation	month	Period 4	1.00	10 925.00	10 925.00
					<b>Total</b>	<b>28 645.00</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	3 567.37
Long Term - WPLT	13 999.49
Evaluation - WPT2	6 625.12
HeatNet Model - WPT3	12 740.61
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	4 296.75
<b>Total:</b>	<b>41 229.34</b>

Travel and accommodation		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
Attending Partner Meetings and Regional Activities		Period 1	1.00	1 100.00	1 100.00
Attending Partner Meetings and Regional Activities		Period 2	4.00	1 100.00	4 400.00
Attending Partner Meetings and Regional Activities		Period 3	4.00	1 100.00	4 400.00
Attending Partner Meetings and Final Conference		Period 4	4.00	550.00	2 200.00
				<b>Total</b>	<b>12 100.00</b>

Travel and accommodation		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Visits of pilots, participations to events (DHC or investment), meeting with other clusters		Period 2	2.00	1 100.00	2 200.00
Visits of pilots, participations to events (DHC or investment), meeting with other clusters		Period 3	2.00	1 100.00	2 200.00
Visits of pilots, participations to events (DHC or investment), meeting with other clusters		Period 4	2.00	1 100.00	2 200.00
				<b>Total</b>	<b>6 600.00</b>

Travel and accommodation		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Visits of pilots, participations to events (DHC), meeting with other clusters		Period 2	2.00	1 100.00	2 200.00
Visits of pilots, participations to events (DHC), meeting with other clusters		Period 3	2.00	1 100.00	2 200.00
Visits of pilots, participations to events (DHC), meeting with other clusters		Period 4	2.00	1 100.00	2 200.00
				<b>Total</b>	<b>6 600.00</b>



Travel and accommodation		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
visit of pilots or event		Period 3	1.00	1 100.00	1 100.00
visit of pilots or event		Period 4	1.00	1 100.00	1 100.00
				<b>Total</b>	<b>2 200.00</b>

External expertise and services		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
Calculated 2.5% Audit FLC cost, on costs incurred as per Walloon auditing guidelines.		Period 1	0.48	1 000.00	480.00
Calculated 2.5% Audit FLC cost, on costs incurred as per Walloon auditing guidelines.		Period 2	2.53	1 000.00	2 530.00
Calculated 2.5% Audit FLC cost, on costs incurred as per Walloon auditing guidelines.		Period 3	3.33	1 000.00	3 330.00
Calculated 2.5% Audit FLC cost, on costs incurred as per Walloon auditing guidelines.		Period 4	3.49	1 000.00	3 490.00
				<b>Total</b>	<b>9 830.00</b>

External expertise and services		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
1 External consultant 640 euro day for communication advices and support for events organisation + 2.5% total budget for financial audit (walloon rules)		Period 2	6.00	640.00	3 840.00
1 External consultant 640 euro day for communication advices and support for events organisation + 2.5% total budget for financial audit (walloon rules)		Period 3	10.00	640.00	6 400.00
1 External consultant 640 euro day for communication advices and support for events organisation + 2.5% total budget for financial audit (walloon rules)		Period 4	10.00	640.00	6 400.00
				<b>Total</b>	<b>16 640.00</b>

External expertise and services		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
1 External consultant 640 euro day financial and technical expertises + 2.5% total budget for financial audit (walloon rules)		Period 1	10.00	640.00	6 400.00
1 External consultant 640 euro day financial and technical expertises + 2.5% total budget for financial audit (walloon rules)		Period 2	10.00	640.00	6 400.00
1 External consultant 640 euro day financial and technical expertises + 2.5% total budget for financial audit (walloon rules)		Period 3	10.00	640.00	6 400.00
1 External consultant 640 euro day financial and technical expertises + 2.5% total budget for financial audit (walloon rules)		Period 4	6.00	640.00	3 840.00
				<b>Total</b>	<b>23 040.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
1 External consultant 640 euro day for communication advices and support for events organisation + 2.5% total budget for financial audit (walloon rules)t		Period 3	6.50	640.00	4 160.00
1 External consultant 640 euro day for communication advices and support for events organisation + 2.5% total budget for financial audit (walloon rules)		Period 4	9.00	640.00	5 760.00
				<b>Total</b>	<b>9 920.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	Stad Kortrijk
<b>Partner ID</b>	4
<b>Legal status</b>	public
<b>Type of partner</b>	local public authority
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

Partner Budget		
	Amount	Co-financing Rate
<b>Programme co-financing</b>	809 401.20	60.00
<b>Partner contribution</b>	539 601.30	
<b>Partner total eligible budget</b>	1 349 002.50	

Origin of partner contribution (indicative)			
Source of contribution	Legal status	% of total partner contribution	Amount
Stad Kortrijk	public	100.00 %	539 601.00
Sub-total public contribution		100.00 %	539 601.00
Sub-total private contribution		0.00 %	0.00
Total		%	539 601.00
Partner total target value			539 601.30

In-kind contribution	
Is there any in-kind contribution included in the project budget for this partner?	no

#### Partner budget - breakdown per budget line (indicative)

Staff costs	
Are you using the flat rate for staff costs?	Yes
Flat rate amount:	20.00
Project management - WPM	4 900.00
Long Term - WPLT	0.00
Evaluation - WPT2	0.00
HeatNet Model - WPT3	5 120.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	207 680.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	1 650.00
<b>Total:</b>	<b>219 350.00</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	735.00
Long Term - WPLT	0.00
Evaluation - WPT2	0.00
HeatNet Model - WPT3	768.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	31 152.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	247.50
<b>Total:</b>	<b>32 902.50</b>

Travel and accommodation		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	4.00	750.00	3 000.00
cost per partner meeting/workshops per person		Period 2	4.00	750.00	3 000.00
cost per partner meeting/workshops per person		Period 3	4.00	750.00	3 000.00
cost per partner meeting/workshops per person		Period 4	2.00	750.00	1 500.00
<b>Total</b>					<b>10 500.00</b>

Travel and accommodation		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 3	1.00	0.00	0.00
<b>Total</b>					<b>0.00</b>

Travel and accommodation		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
travel to events, workshops (2/year, 1 person)		Period 2	2.00	375.00	750.00
travel to events, workshops (2/year, 1 person)		Period 3	2.00	375.00	750.00
travel to events, workshops (2/year, 1 person)		Period 4	2.00	375.00	750.00
<b>Total</b>					<b>2 250.00</b>

External expertise and services		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
FLC Audits		Period 2	2.00	2 000.00	4 000.00
FLC Audits		Period 3	2.00	2 000.00	4 000.00
FLC Audits		Period 4	3.00	2 000.00	6 000.00
<b>Total</b>					<b>14 000.00</b>

External expertise and services		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
External expertise for design study of ESCO (Dx 2.2)		Period 3	32.00	800.00	25 600.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>25 600.00</b>

External expertise and services		Plymouth Living Lab - WPI1			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		South Dublin Living Lab - WPI2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Aberdeen Living Lab - WPI3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Kortrijk Living Lab - WPI4			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
50 units for Deliverable I4.1.2 and 106 units external expertise predominately for Activity 1, less for Activity 2 and minor for Activity 3		Period 2	156.00	800.00	124 800.00
50 units for study Deliverable I4.1.2 and 74 units for external expertise predominately for Deliverable 2.1		Period 3	124.00	800.00	99 200.00
62 units for studies Deliverable I4.1.2 and 106 units of external expertise predominately for activity 3.		Period 4	168.00	800.00	134 400.00
				<b>Total</b>	<b>358 400.00</b>

External expertise and services		Heerlen Living Lab - WPI5			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Boulogne sur Mer Living Lab - WPI6			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
communication and promotion		Period 2	1.00	2 000.00	2 000.00
communication and promotion		Period 3	1.00	2 000.00	2 000.00
communication and promotion		Period 4	1.00	2 000.00	2 000.00
				<b>Total</b>	<b>6 000.00</b>

Equipment		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 3	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Equipment		Kortrijk Living Lab - WPI4			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
server, metering and monitoring		Period 2	1.00	80 000.00	80 000.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>80 000.00</b>

Infrastructure and works		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 3	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		Kortrijk Living Lab - WPI4			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
District Heating Network Pipes CKW and exchangers		Period 2	1.00	100 000.00	100 000.00
District Heating Extension CKW Hubs and further extension		Period 3	1.00	200 000.00	200 000.00
Hubs and further extensions		Period 4	1.00	300 000.00	300 000.00
				<b>Total</b>	<b>600 000.00</b>

Net Revenue		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 3	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	Intercommunale Leiedal
<b>Partner ID</b>	5
<b>Legal status</b>	public
<b>Type of partner</b>	local public authority
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

Partner Budget		
	Amount	Co-financing Rate
<b>Programme co-financing</b>	179 850.00	60.00
<b>Partner contribution</b>	119 900.00	
<b>Partner total eligible budget</b>	299 750.00	

Origin of partner contribution (indicative)			
Source of contribution	Legal status	% of total partner contribution	Amount
Intercommunale Leiedal	public	100.00 %	119 900.00
Sub-total public contribution		100.00 %	119 900.00
Sub-total private contribution		0.00 %	0.00
Total		%	119 900.00
Partner total target value			119 900.00

In-kind contribution	
Is there any in-kind contribution included in the project budget for this partner?	no

#### Partner budget - breakdown per budget line (indicative)

Staff costs	
Are you using the flat rate for staff costs?	No
Project management - WPM	30 000.00
Long Term - WPLT	105 000.00
Evaluation - WPT2	7 500.00
HeatNet Model - WPT3	18 750.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	26 250.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	22 500.00
<b>Total:</b>	210 000.00



Staff costs			Project management - WPM			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	project management, attendance of partner meetings, reporting	month	Period 1	1.00	7 500.00	7 500.00
	project management, attendance of partner meetings, reporting	month	Period 2	1.00	7 500.00	7 500.00
	project management, attendance of partner meetings, reporting	month	Period 3	1.00	7 500.00	7 500.00
	project management, attendance of partner meetings, reporting	month	Period 4	1.00	7 500.00	7 500.00
					<b>Total</b>	<b>30 000.00</b>

Staff costs			Long Term - WPLT			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	Contribute to transnational co-creation of framework to create regional roadmap for long term impact. Preparation of regional roll-out (assessment of potential regional impact of 4DHC: spatial issues).	month	Period 1	4.00	7 500.00	30 000.00
	regional application of framework & creation of a regional roadmap for long term impact. Processes with stakeholders.	month	Period 2	4.00	7 500.00	30 000.00
	regional application of framework & creation of a regional roadmap for long term impact. Processes with stakeholders. Management of interaction with spatial planning.	month	Period 3	4.00	7 500.00	30 000.00
	initiation of roll-out of regional roadmap for long term impact. Management of interaction with spatial planning. Processes with stakeholders.	month	Period 4	2.00	7 500.00	15 000.00
					<b>Total</b>	<b>105 000.00</b>

Staff costs			Evaluation - WPT2			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
			Period 1	1.00	0.00	0.00
	support evaluation of pilot city of Kortrijk		Period 2	0.50	7 500.00	3 750.00
	support evaluation of pilot city of Kortrijk		Period 3	0.50	7 500.00	3 750.00
			Period 4	1.00	0.00	0.00
					<b>Total</b>	<b>7 500.00</b>

Staff costs			HeatNet Model - WPT3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time		month	Period 1	1.00	0.00	0.00
	contribution to the development of the HeatNET-model and its regional tailoring, testing and application	month	Period 2	1.00	7 500.00	7 500.00
	contribution to the development of the HeatNET-model and its regional tailoring, testing and application	month	Period 3	1.00	7 500.00	7 500.00
	contribution to the development of the HeatNET-model and its regional tailoring, testing and application	month	Period 4	0.50	7 500.00	3 750.00
					<b>Total</b>	<b>18 750.00</b>

Staff costs			Plymouth Living Lab - WPI1			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
			Period 1	1.00	0.00	0.00
			Period 2	1.00	0.00	0.00
			Period 3	1.00	0.00	0.00
			Period 4	1.00	0.00	0.00
					<b>Total</b>	<b>0.00</b>

Staff costs			Kortrijk Living Lab - WPI4			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	providing bilateral support to the city of Kortrijk on the pilot, apply expertise from other WP's, connect with regional roll-out strategy	month	Period 1	1.00	7 500.00	7 500.00
	providing bilateral support to the city of Kortrijk on the pilot, apply expertise from other WP's, connect with regional roll-out strategy	month	Period 2	1.00	7 500.00	7 500.00
	providing bilateral support to the city of Kortrijk on the pilot, apply expertise from other WP's, connect with regional roll-out strategy	month	Period 3	1.00	7 500.00	7 500.00
	providing bilateral support to the city of Kortrijk on the pilot, apply expertise from other WP's, connect with regional roll-out strategy	month	Period 4	0.50	7 500.00	3 750.00
					<b>Total</b>	<b>26 250.00</b>

Staff costs			Communication - WPC			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	regional communication activities, contribute to transnational communication	month	Period 1	0.50	7 500.00	3 750.00
	regional communication activities, contribute to transnational communication	month	Period 2	0.50	7 500.00	3 750.00
	regional communication activities, contribute to transnational communication	month	Period 3	1.00	7 500.00	7 500.00
	regional communication activities, contribute to transnational communication	month	Period 4	1.00	7 500.00	7 500.00
					<b>Total</b>	<b>22 500.00</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	4 500.00
Long Term - WPLT	15 750.00
Evaluation - WPT2	1 125.00
HeatNet Model - WPT3	2 812.50
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	3 937.50
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	3 375.00
<b>Total:</b>	<b>31 500.00</b>

Travel and accommodation		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
partner meetings & workshops		Period 1	3.00	750.00	2 250.00
partner meetings & workshops		Period 2	2.00	750.00	1 500.00
partner meetings & workshops		Period 3	2.00	750.00	1 500.00
partner meetings & workshops		Period 4	3.00	750.00	2 250.00
				<b>Total</b>	<b>7 500.00</b>

Travel and accommodation		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
travel costs for meetings, seminars, etc.		Period 1	1.00	1 000.00	1 000.00
travel costs for meetings, seminars, etc.		Period 2	1.00	1 000.00	1 000.00
travel costs for meetings, seminars, etc.		Period 3	1.00	1 000.00	1 000.00
travel costs for meetings, seminars, etc.		Period 4	1.00	500.00	500.00
				<b>Total</b>	<b>3 500.00</b>

External expertise and services		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
FLC-audit		Period 1	1.00	750.00	750.00
FLC-audit		Period 2	2.00	750.00	1 500.00
FLC-audit		Period 3	2.00	750.00	1 500.00
FLC-audit		Period 4	2.00	750.00	1 500.00
				<b>Total</b>	<b>5 250.00</b>

External expertise and services		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
Expertise in spatial energy mapping related to spatial planning and energy atlas (GIS), to be able to identify high potential zones for 4DHC and relate with potential renewable input sources		Period 1	1.00	10 000.00	10 000.00
Expertise on spatial energy issues in urban design and spatial planning to be able to do research-by-design to enable the implementation of 4DHC on different spatial levels (from regional to site-specific)		Period 2	1.00	10 000.00	10 000.00
Expertise on spatial energy issues in urban design and spatial planning to be able to do research-by-design to enable the implementation of 4DHC on different spatial levels (from regional to site-specific)		Period 3	1.00	10 000.00	10 000.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>30 000.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
communication material, publishing, media costs		Period 1	3.00	1 000.00	3 000.00
communication material, publishing, media costs		Period 2	3.00	1 000.00	3 000.00
communication material, publishing, media costs		Period 3	3.00	1 000.00	3 000.00
communication material, publishing, media costs		Period 4	3.00	1 000.00	3 000.00
				<b>Total</b>	<b>12 000.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	Energy Cities
<b>Partner ID</b>	6
<b>Legal status</b>	private
<b>Type of partner</b>	interest groups including NGOs
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

<b>Partner Budget</b>		
	<b>Amount</b>	<b>Co-financing Rate</b>
<b>Programme co-financing</b>	190 009.20	60.00
<b>Partner contribution</b>	126 673.30	
<b>Partner total eligible budget</b>	316 682.50	

<b>Origin of partner contribution (indicative)</b>			
<b>Source of contribution</b>	<b>Legal status</b>	<b>% of total partner contribution</b>	<b>Amount</b>
Energy Cities	private	100.00 %	126 673.00
Sub-total public contribution		0.00 %	0.00
Sub-total private contribution		100.00 %	126 673.00
Total		%	126 673.00
Partner total target value			126 673.30

<b>In-kind contribution</b>	
Is there any in-kind contribution included in the project budget for this partner?	no

**Partner budget - breakdown per budget line (indicative)**

<b>Staff costs</b>	
Are you using the flat rate for staff costs?	No
Project management - WPM	32 400.00
Long Term - WPLT	137 500.00
Evaluation - WPT2	11 000.00
HeatNet Model - WPT3	11 000.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	69 300.00
<b>Total:</b>	261 200.00

Staff costs			Project management - WPM			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Part time with a fixed percentage	project management, attendance of partner meetings, reporting for Payment Claims etc.	month	Period 1	0.40	6 000.00	2 400.00
	project management, attendance of partner meetings, reporting for Payment Claims etc.	month	Period 2	1.50	6 000.00	9 000.00
	project management, attendance of partner meetings, reporting for Payment Claims etc.	month	Period 3	1.50	6 000.00	9 000.00
	project management, attendance of partner meetings, reporting for Payment Claims etc.	month	Period 4	2.00	6 000.00	12 000.00
					<b>Total</b>	<b>32 400.00</b>

Staff costs			Long Term - WPLT			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Part time with a fixed percentage	Extend database of public authorities; Lead delivery of Peer to Peer training/mentoring materials and events, lead Legislative and Regulatory review and Recommendations; contribute to procurement framework and finance protocols	month	Period 1	1.00	5 500.00	5 500.00
	Extend database of public authorities	month	Period 2	4.00	5 500.00	22 000.00
	delivery of Peer to Peer training/mentoring events, lead Legislative and Regulatory review and Recommendations	month	Period 3	10.00	5 500.00	55 000.00
	delivery of Peer to Peer training/mentoring events, lead Legislative and Regulatory review and Recommendations; contribute to procurement framework and finance protocols	month	Period 4	10.00	5 500.00	55 000.00
					<b>Total</b>	<b>137 500.00</b>

Staff costs			Evaluation - WPT2			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Part time with a fixed percentage		month	Period 1	1.00	0.00	0.00
	Contribution to the evaluation	month	Period 2	1.00	5 500.00	5 500.00
	Contribution to the evaluation	month	Period 3	1.00	5 500.00	5 500.00
	Contribution to the evaluation	month	Period 4	0.00	5 500.00	0.00
					<b>Total</b>	<b>11 000.00</b>

Staff costs			HeatNet Model - WPT3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Part time with a fixed percentage	Contribute to "How to Guide to build and finance 4DHC"	month	Period 1	1.00	0.00	0.00
	Contribute to "How to Guide to build and finance 4DHC"	month	Period 2	2.00	5 500.00	11 000.00
		month	Period 3	1.00	0.00	0.00
		month	Period 4	1.00	0.00	0.00
					<b>Total</b>	<b>11 000.00</b>

Staff costs			Communication - WPC			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Part time with a fixed percentage	Preparation of Communications Plan	month	Period 1	2.60	5 500.00	14 300.00
	Management of Project communications at Global Project Level, Webinars, Promotion and Dissemination	month	Period 2	3.00	5 500.00	16 500.00
	Management of Project communications at Global Project Level, Webinars, Promotion and Dissemination	month	Period 3	3.00	5 500.00	16 500.00
	Management of Project communications at Global Project Level, Webinars, Promotion and Dissemination. Organisation of Final Conference in Brussels with concomitant publicity and report distribution.	month	Period 4	4.00	5 500.00	22 000.00
					<b>Total</b>	<b>69 300.00</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	4 860.00
Long Term - WPLT	20 625.00
Evaluation - WPT2	1 650.00
HeatNet Model - WPT3	1 650.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	10 395.00
<b>Total:</b>	<b>39 180.00</b>

Travel and accommodation		Project management - WPM				
Description	Unit type	Period	No. of units	Price per unit	Total	
Travel costs for partners meetings for 2 people		Period 1	2.00	700.00	1 400.00	
Travel costs for partners meetings for 2 people		Period 2	4.00	700.00	2 800.00	
Travel costs for partners meetings for 2 people		Period 3	4.00	700.00	2 800.00	
Travel costs for partners meetings for 2 people		Period 4	4.00	700.00	2 800.00	
					<b>Total</b>	<b>9 800.00</b>

Travel and accommodation		Long Term - WPLT				
Description	Unit type	Period	No. of units	Price per unit	Total	
		Period 1	1.00	0.00	0.00	
Costs incurred for Travel to Local, Regional, National and International meetings / conferences etc on Long Term Impact of DHC		Period 2	1.00	750.00	750.00	
Costs incurred for Travel to Local, Regional, National and International meetings / conferences etc on Long Term Impact of DHC		Period 3	1.50	750.00	1 125.00	
Costs incurred for Travel to Local, Regional, National and International meetings / conferences etc on Long Term Impact of DHC		Period 4	2.17	750.00	1 627.50	
					<b>Total</b>	<b>3 502.50</b>

Travel and accommodation		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Cost of Attending Regional Events / Seminars.		Period 2	1.00	750.00	750.00
Travel associated with Comms WP Leader		Period 3	1.00	750.00	750.00
Travel costs for arranging Final Conference, attending Local and Regional Events etc.		Period 4	2.00	750.00	1 500.00
				<b>Total</b>	<b>3 000.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	Ville de Boulogne-sur-Mer
<b>Partner ID</b>	7
<b>Legal status</b>	public
<b>Type of partner</b>	local public authority
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

Partner Budget		
	Amount	Co-financing Rate
<b>Programme co-financing</b>	846 294.00	60.00
<b>Partner contribution</b>	564 195.60	
<b>Partner total eligible budget</b>	1 410 489.60	

Origin of partner contribution (indicative)			
Source of contribution	Legal status	% of total partner contribution	Amount
Ville de Boulogne-sur-Mer	public	100.00 %	564 195.84
Sub-total public contribution		100.00 %	564 195.84
Sub-total private contribution		0.00 %	0.00
Total		%	564 195.84
Partner total target value			564 195.60

In-kind contribution	
Is there any in-kind contribution included in the project budget for this partner?	no

#### Partner budget - breakdown per budget line (indicative)

Staff costs	
Are you using the flat rate for staff costs?	No
Project management - WPM	34 188.00
Long Term - WPLT	18 760.00
Evaluation - WPT2	8 260.00
HeatNet Model - WPT3	46 760.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	38 080.00
Communication - WPC	4 816.00
<b>Total:</b>	150 864.00



Staff costs			Project management - WPM			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	Management is mainly on sub partner HL for translation - claims - MCs - territorial updates. No one only dedicated to project.	month	Period 1	111.00	28.00	3 108.00
	Management is mainly on sub partner HL for translation - claims - MCs - territorial updates. No one only dedicated to project.	month	Period 2	300.00	28.00	8 400.00
	Management is mainly on sub partner HL for translation - claims - MCs - territorial updates. No one only dedicated to project.	month	Period 3	310.00	28.00	8 680.00
	Management is mainly on sub partner HL for translation - claims - MCs - territorial updates. No one only dedicated to project.	month	Period 4	500.00	28.00	14 000.00
					<b>Total</b>	<b>34 188.00</b>

Staff costs			Long Term - WPLT			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	training, networking, link with french national committee on DHCs (regularly all along the project)	month	Period 1	20.00	28.00	560.00
	training, networking, link with french national committee on DHCs (regularly all along the project)	month	Period 2	150.00	28.00	4 200.00
	training, networking, link with french national committee on DHCs (regularly all along the project)	month	Period 3	250.00	28.00	7 000.00
	training, networking, link with french national committee on DHCs (regularly all along the project)	month	Period 4	250.00	28.00	7 000.00
					<b>Total</b>	<b>18 760.00</b>

Staff costs			Evaluation - WPT2			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	Time to procure for energy audits of buildings after connecting to DHC when datas before connection are available = promote DHC to inhabitants- assessment on management (delegated) Procurement	month	Period 1	10.00	28.00	280.00
	Analysis and meetings on first energy audits - liaise with universities	month	Period 2	85.00	28.00	2 380.00
	Analysis and meetings on first energy audits - liaise with universities	month	Period 3	50.00	28.00	1 400.00
	Procure - analysis - strategies for improvements	month	Period 4	150.00	28.00	4 200.00
					<b>Total</b>	<b>8 260.00</b>

Staff costs			HeatNet Model - WPT3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	work with partners on removing barriers	month	Period 1	300.00	28.00	8 400.00
	work on reports - guide - from Wp Investmentt -	month	Period 2	720.00	28.00	20 160.00
	work on reports - guide - from Wp Investmentt -	month	Period 3	400.00	28.00	11 200.00
	feed into toolkit / roadmap	month	Period 4	250.00	28.00	7 000.00
					<b>Total</b>	<b>46 760.00</b>

Staff costs			Boulogne sur Mer Living Lab - WPI6			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	procurement - negotiations - setting up contracts - drafting guides - drafting reports - translation - preliminary studies - framework documents - setting up of strategy for better energy management - work on impacts of PSD	month	Period 1	60.00	28.00	1 680.00
	procurement - analysis - work on reports and guides - negotiations	month	Period 2	500.00	28.00	14 000.00
	work on reports and guides - negotiations	month	Period 3	750.00	28.00	21 000.00
	work on reports and guides - negotiations	month	Period 4	50.00	28.00	1 400.00
					<b>Total</b>	<b>38 080.00</b>

Staff costs			Communication - WPC			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	time for newsletter / blog / website / newspapers + communication strategy	month	Period 1	35.00	28.00	980.00
	Setting up communication Strategy / Use internal communication mode / Use local newspaper for launch of project (and then for every particular even) / Informative meetings		Period 2	40.00	28.00	1 120.00
	Informative meetings / Public meetings		Period 3	55.00	28.00	1 540.00
	Informative meetings / Public meetings		Period 4	42.00	28.00	1 176.00
					<b>Total</b>	<b>4 816.00</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	5 128.20
Long Term - WPLT	2 814.00
Evaluation - WPT2	1 239.00
HeatNet Model - WPT3	7 014.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	5 712.00
Communication - WPC	722.40
<b>Total:</b>	<b>22 629.60</b>

Travel and accommodation		Project management - WPM				
Description	Unit type	Period	No. of units	Price per unit	Total	
To attend monitoring committees / events - for HL and city meetings to prepare claims and MCs		Period 1	2.00	333.00	666.00	
To attend monitoring committees / events - for HL and city meetings to prepare claims and MCs		Period 2	2.00	777.00	1 554.00	
To attend monitoring committees / events - for HL and city meetings to prepare claims and MCs		Period 3	2.00	333.00	666.00	
To attend monitoring committees / events - for HL and city meetings to prepare claims and MCs		Period 4	2.00	666.00	1 332.00	
					<b>Total</b>	<b>4 218.00</b>

Travel and accommodation		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
to attend training, participate in conferences (same comment as above)		Period 1	1.00	0.00	0.00
to attend training, participate in conferences (same comment as above)		Period 2	2.00	150.00	300.00
to attend training, participate in conferences (same comment as above)		Period 3	2.00	250.00	500.00
to attend training, participate in conferences (same comment as above)		Period 4	1.00	100.00	100.00
				<b>Total</b>	<b>900.00</b>

Travel and accommodation		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 3	0.50	80.00	40.00
		Period 4	0.50	30.00	15.00
				<b>Total</b>	<b>55.00</b>

Travel and accommodation		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
site visits		Period 1	20.00	0.50	10.00
site visits		Period 2	60.00	0.50	30.00
site visits		Period 3	60.00	0.50	30.00
site visits		Period 4	20.00	0.50	10.00
				<b>Total</b>	<b>80.00</b>

Travel and accommodation		Boulogne sur Mer Living Lab - WPI6			
Description	Unit type	Period	No. of units	Price per unit	Total
regular site visits		Period 1	64.00	4.00	256.00
regular site visits		Period 2	192.00	4.00	768.00
regular site visits		Period 3	96.00	4.00	384.00
regular site visits		Period 4	40.00	4.00	160.00
				<b>Total</b>	<b>1 568.00</b>

External expertise and services		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
FLC - shared costs		Period 1	1.00	3 000.00	3 000.00
FLC - shared costs		Period 2	1.00	6 000.00	6 000.00
FLC - shared costs		Period 3	1.00	6 000.00	6 000.00
FLC - shared costs		Period 4	1.00	7 500.00	7 500.00
				<b>Total</b>	<b>22 500.00</b>

External expertise and services		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	750.00	0.00	0.00
energy audits (50€ per unit). Assessment / Comparison of energy use of buildings before and after connection. Assessment of DHC extension . Optimization of connections .		Period 2	750.00	50.00	37 500.00
energy audits (50€ per unit). Assessment / Comparison of energy use of buildings before and after connection. Assessment of DHC extension . Optimization of connections .		Period 3	750.00	50.00	37 500.00
expert to audit overall efficiency (running / maintenance)		Period 4	1.00	6 000.00	6 000.00
				<b>Total</b>	<b>81 000.00</b>

External expertise and services		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Plymouth Living Lab - WPI1			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		South Dublin Living Lab - WPI2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Aberdeen Living Lab - WPI3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Kortrijk Living Lab - WPI4			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Heerlen Living Lab - WPI5			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Boulogne sur Mer Living Lab - WPI6			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	0.00	0.00	0.00
Expertise on options to improve secondary network and energy management in buildings connected to DHC Study on the potential of waste energy to be used from Nausicaa Pipe routes options and link with other future cooling networks		Period 2	1.00	55 000.00	55 000.00
Expertise on options to improve secondary network and energy management in buildings connected to DHC Study on the potential of waste energy to be used from Nausicaa Pipe routes options and link with other future cooling networks		Period 3	1.00	75 000.00	75 000.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>130 000.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
to print booklets / flyers / USB sticks for people working on HeatNet (to have all required documents at meetings - with DHC partners) - catering for informative meetings		Period 1	1.00	0.00	0.00
Communication tools for meetings and logos on investment sites		Period 2	1.00	3 800.00	3 800.00
For local publication on HeatNet (printing)		Period 3	1.00	200.00	200.00
printing reports for local partner for dissemination		Period 4	1.00	400.00	400.00
				<b>Total</b>	<b>4 400.00</b>

Equipment		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
Sat Nav to INTERREG MCs (not fully claimed under HeatNet)		Period 1	1.00	75.00	75.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>75.00</b>

Equipment		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 3	1.00	0.00	0.00
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Equipment		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Equipment		Boulogne sur Mer Living Lab - WPI6			
Description	Unit type	Period	No. of units	Price per unit	Total
setting up of various meters at the substation level (7 substations) - multiplication of capture for energy data to be used to improve energy management (about 120) meter in each sub station (7)		Period 1	7.00	400.00	2 800.00
		Period 2	120.00	120.00	14 400.00
meter in each sub station (7) captors for better energy management		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>17 200.00</b>

Infrastructure and works		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 3	1.00	0.00	0.00
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		Boulogne sur Mer Living Lab - WPI6			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Transmission pipes (only part focused on end energy use and potential future connections with cooling network). Heat Exchangers and Installation. Connection for end energy and estates.		Period 2	1.00	175 000.00	175 000.00
Transmission pipes (only part focused on end energy use and potential future connections with cooling network). Heat Exchangers and Installation. Connection for end energy and estates.		Period 3	1.00	500 000.00	500 000.00
Improvement of secondary network and energy management systems in buildings connected to DHC.		Period 4	1.00	300 000.00	300 000.00
				<b>Total</b>	<b>975 000.00</b>

Net Revenue		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 2	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Net Revenue		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 3	1.00	0.00	0.00
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Net Revenue		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

#printPartnerSumBudget( \$partner )



<b>Name of partner organisation</b>	Universiteit Gent
<b>Partner ID</b>	8
<b>Legal status</b>	public
<b>Type of partner</b>	higher education and research
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

<b>Partner Budget</b>		
	<b>Amount</b>	<b>Co-financing Rate</b>
<b>Programme co-financing</b>	210 183.00	60.00
<b>Partner contribution</b>	140 122.00	
<b>Partner total eligible budget</b>	350 305.00	

<b>Origin of partner contribution (indicative)</b>			
<b>Source of contribution</b>	<b>Legal status</b>	<b>% of total partner contribution</b>	<b>Amount</b>
Universiteit Gent	public	100.00 %	140 122.00
Sub-total public contribution		100.00 %	140 122.00
Sub-total private contribution		0.00 %	0.00
Total		%	140 122.00
Partner total target value			140 122.00

<b>In-kind contribution</b>	
Is there any in-kind contribution included in the project budget for this partner?	no

**Partner budget - breakdown per budget line (indicative)**

<b>Staff costs</b>	
Are you using the flat rate for staff costs?	No
Project management - WPM	26 400.00
Long Term - WPLT	19 800.00
Evaluation - WPT2	33 000.00
HeatNet Model - WPT3	46 200.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	105 600.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	42 900.00
<b>Total:</b>	273 900.00



Staff costs			Project management - WPM			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	Contribution to partner meetings, payment claims and partnership requirements	month	Period 1	1.00	6 600.00	6 600.00
	Contribution to partner meetings, payment claims and partnership requirements	month	Period 2	1.00	6 600.00	6 600.00
	Contribution to partner meetings, payment claims and partnership requirements	month	Period 3	1.00	6 600.00	6 600.00
	Contribution to partner meetings, payment claims and partnership requirements	month	Period 4	1.00	6 600.00	6 600.00
					<b>Total</b>	<b>26 400.00</b>

Staff costs			Long Term - WPLT			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time		month	Period 1	1.00	0.00	0.00
		month	Period 2	1.00	0.00	0.00
		month	Period 3	1.00	0.00	0.00
	Contribute to Transition roadmap guide	month	Period 4	3.00	6 600.00	19 800.00
					<b>Total</b>	<b>19 800.00</b>

Staff costs			Evaluation - WPT2			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	Evaluation Plan, development of KPIs	month	Period 1	1.00	6 600.00	6 600.00
	Recommendations for HeatNet Model	month	Period 2	1.00	6 600.00	6 600.00
	Contribute to case study report cards	month	Period 3	2.00	6 600.00	13 200.00
	Contribute to evaluation report	month	Period 4	1.00	6 600.00	6 600.00
					<b>Total</b>	<b>33 000.00</b>

Staff costs			HeatNet Model - WPT3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	District Heating tools - Non technical Guide and How to build 4DHC	month	Period 1	1.00	6 600.00	6 600.00
	District Heating tools - Non technical Guide and How to build 4DHC	month	Period 2	2.00	6 600.00	13 200.00
	District Heating tools - Non technical Guide and How to build 4DHC	month	Period 3	2.00	6 600.00	13 200.00
	District Heating tools - Non technical Guide and How to build 4DHC	month	Period 4	2.00	6 600.00	13 200.00
					<b>Total</b>	<b>46 200.00</b>

Staff costs			Kortrijk Living Lab - WPI4			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
			Period 1	1.00	0.00	0.00
Full-time	Feasibility study business case and Bi-Lateral support	month	Period 2	8.00	6 600.00	52 800.00
	Technical Study with dossier ready for procurement	month	Period 3	5.00	6 600.00	33 000.00
	Bi-Lateral Support	month	Period 4	3.00	6 600.00	19 800.00
					<b>Total</b>	<b>105 600.00</b>

Staff costs			Communication - WPC			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	contribution to regional communication & dissemination , overall transnational and partnership communications strategy.	month	Period 1	0.50	6 600.00	3 300.00
	contribution to regional communication & dissemination , overall transnational and partnership communications strategy.	month	Period 2	2.00	6 600.00	13 200.00
	contribution to regional communication & dissemination , overall transnational and partnership communications strategy.	month	Period 3	2.00	6 600.00	13 200.00
	contribution to regional communication & dissemination , overall transnational and partnership communications strategy.	month	Period 4	2.00	6 600.00	13 200.00
					<b>Total</b>	<b>42 900.00</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	3 960.00
Long Term - WPLT	2 970.00
Evaluation - WPT2	4 950.00
HeatNet Model - WPT3	6 930.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	15 840.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	6 435.00
<b>Total:</b>	<b>41 085.00</b>

Travel and accommodation		Project management - WPM				
Description	Unit type	Period	No. of units	Price per unit	Total	
6 partner meetings (2d/meeting) + 3 wp meetings (1d) x 3 persons		Period 1	2.00	510.00	1 020.00	
6 partner meetings (2d/meeting) + 3 wp meetings (1d) x 3 persons		Period 2	8.00	510.00	4 080.00	
6 partner meetings (2d/meeting) + 3 wp meetings (1d) x 3 persons		Period 3	8.00	510.00	4 080.00	
6 partner meetings (2d/meeting) + 3 wp meetings (1d) x 3 persons		Period 4	9.00	510.00	4 590.00	
					<b>Total</b>	<b>13 770.00</b>

Travel and accommodation		Evaluation - WPT2				
Description	Unit type	Period	No. of units	Price per unit	Total	
		Period 1	1.00	0.00	0.00	
Travel for stakeholder interviews and Pilot Visits		Period 2	2.00	255.00	510.00	
Travel for stakeholder interviews and Pilot Visits		Period 3	2.00	255.00	510.00	
		Period 4	1.00	0.00	0.00	
					<b>Total</b>	<b>1 020.00</b>

Travel and accommodation		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Local, Regional and National Seminar and Meeting travel costs		Period 2	2.00	255.00	510.00
Local, Regional and National Seminar and Meeting travel costs		Period 3	2.00	255.00	510.00
Local, Regional and National Seminar and Meeting travel costs		Period 4	2.00	255.00	510.00
				<b>Total</b>	<b>1 530.00</b>

External expertise and services		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
FLC audits		Period 1	1.00	0.00	0.00
FLC audits		Period 2	2.00	2 000.00	4 000.00
FLC audits		Period 3	2.00	2 000.00	4 000.00
FLC audits		Period 4	3.00	2 000.00	6 000.00
				<b>Total</b>	<b>14 000.00</b>

External expertise and services		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Renting of Location for interviews		Period 2	3.00	500.00	1 500.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>1 500.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
local/regional communication: promotion, communication, publicity or information (eg. printing, etc.), services related to the organisation, implementation and participation of events or meetings (eg. catering, etc.)		Period 3	1.00	3 500.00	3 500.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>3 500.00</b>

Infrastructure and works		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	Hogeschool van Amsterdam
<b>Partner ID</b>	9
<b>Legal status</b>	public
<b>Type of partner</b>	higher education and research
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

Partner Budget		
	Amount	Co-financing Rate
<b>Programme co-financing</b>	217 089.60	60.00
<b>Partner contribution</b>	144 726.28	
<b>Partner total eligible budget</b>	361 815.88	

Origin of partner contribution (indicative)			
Source of contribution	Legal status	% of total partner contribution	Amount
Hogeschool van Amsterdam	public	100.00 %	144 726.36
Sub-total public contribution		100.00 %	144 726.36
Sub-total private contribution		0.00 %	0.00
Total		%	144 726.36
Partner total target value			144 726.28

In-kind contribution	
Is there any in-kind contribution included in the project budget for this partner?	no

#### Partner budget - breakdown per budget line (indicative)

Staff costs	
Are you using the flat rate for staff costs?	No
Project management - WPM	41 423.99
Long Term - WPLT	27 351.33
Evaluation - WPT2	190 737.06
HeatNet Model - WPT3	20 120.26
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	4 120.38
<b>Total:</b>	<b>283 753.02</b>

Staff costs			Project management - WPM			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	2 meetings 2 people 4 days + wp 3 leader 49 days	month	Period 1	0.61	7 221.76	4 405.27
	2 meetings 2 people 4 days + wp 3 leader 49 days	month	Period 2	1.79	7 042.82	12 606.64
	2 meetings 2 people 4 days + wp 3 leader	month	Period 3	1.73	7 055.52	12 206.04
		month	Period 4	1.73	7 055.52	12 206.04
					<b>Total</b>	<b>41 423.99</b>

Staff costs			Long Term - WPLT			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis		month	Period 1	1.00	0.00	0.00
	contribute to heat mapping, guide to non technical issues, business cases	month	Period 2	1.50	7 174.02	10 761.03
	contribute to heat mapping, guide to non technical issues, business cases	month	Period 3	1.60	7 254.79	11 607.66
	contribute to heat mapping, guide to non technical issues, business cases	month	Period 4	0.67	7 436.78	4 982.64
					<b>Total</b>	<b>27 351.33</b>

Staff costs			Evaluation - WPT2			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	Lead WP and make Evaluation plan, set up interviews of 5 stakeholders at 6 pilots 2 times and analyses, pilot case descriptions;	month	Period 1	0.94	7 597.23	7 141.39
	Lead WP and make Evaluation plan, interviews of 5 stakeholders at 6 pilots 2 times and analyses, pilot case descriptions; recommendations to WP 4 HeatNet model and WP 5 Long Term Impact;		Period 2	9.81	7 485.63	73 434.03
	Lead WP and analyses, pilot case descriptions; recommendations to WP 4 HeatNet model and WP 5 Long Term Impact;		Period 3	7.77	7 537.91	58 569.56
	Lead WP and interviews of 5 stakeholders at 6 pilots 2 times and analyses, pilot case descriptions; recommendations to WP 4 HeatNet model and WP 5 Long Term Impact; Output: Evaluation report and summary booklet		Period 4	7.02	7 349.30	51 592.08
					<b>Total</b>	<b>190 737.06</b>

Staff costs			HeatNet Model - WPT3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
	contribute to financing		Period 1	1.00	0.00	0.00
Hourly basis	contribute to financing	month	Period 2	1.30	6 649.17	8 643.92
	contribute to financing	month	Period 3	1.00	6 649.17	6 649.17
	contribute to financing	month	Period 4	0.73	6 612.57	4 827.17
					<b>Total</b>	<b>20 120.26</b>

Staff costs			Communication - WPC			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis		month	Period 1	1.00	0.00	0.00
	1 regional workshops with MRA stakeholders in Amsterdam region	month	Period 2	0.17	8 223.78	1 398.04
	1 regional workshops with MRA stakeholders in Amsterdam region	month	Period 3	0.17	8 223.78	1 398.04
	1 regional workshops with MRA stakeholders in Amsterdam region	month	Period 4	0.17	7 790.00	1 324.30
					<b>Total</b>	<b>4 120.38</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	6 213.58
Long Term - WPLT	4 102.68
Evaluation - WPT2	28 610.54
HeatNet Model - WPT3	3 018.02
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	618.04
<b>Total:</b>	<b>42 562.86</b>

Travel and accommodation		Project management - WPM				
Description	Unit type	Period	No. of units	Price per unit	Total	
1 meetings 3 people 4 nights (AUAS and AEB)		Period 1	1.50	1 520.00	2 280.00	
2 meetings 2 people 4 nights		Period 2	2.00	1 520.00	3 040.00	
2 meetings 2 people 4 nights		Period 3	2.00	1 520.00	3 040.00	
2 meetings 2 people 4 nights AUAS, 1 meeting AEB		Period 4	2.50	1 520.00	3 800.00	
					<b>Total</b>	<b>12 160.00</b>

Travel and accommodation		Evaluation - WPT2				
Description	Unit type	Period	No. of units	Price per unit	Total	
travel to interview at 1 pilot		Period 1	1.00	445.00	445.00	
travel and accomodation for interviews to 5 pilots 3 nights stay		Period 2	5.00	445.00	2 225.00	
		Period 3	1.00	0.00	0.00	
travel and accomodation for interviews to 6 pilots 3 nights stay		Period 4	6.00	445.00	2 670.00	
					<b>Total</b>	<b>5 340.00</b>

External expertise and services		Project management - WPM				
Description	Unit type	Period	No. of units	Price per unit	Total	
		Period 1	1.00	0.00	0.00	
control costs (2 audits)		Period 2	2.00	2 000.00	4 000.00	
control costs (2 audits)		Period 3	2.00	2 000.00	4 000.00	
control costs (2 audits)		Period 4	2.00	2 000.00	4 000.00	
					<b>Total</b>	<b>12 000.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
location and catering for 1 regional workshops		Period 2	1.00	2 000.00	2 000.00
location and catering for 1 regional workshops		Period 3	1.00	2 000.00	2 000.00
location and catering for 1 regional workshops		Period 4	1.00	2 000.00	2 000.00
				<b>Total</b>	<b>6 000.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	Les 7 Vents
<b>Partner ID</b>	10
<b>Legal status</b>	private
<b>Type of partner</b>	SME
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

Partner Budget		
	Amount	Co-financing Rate
<b>Programme co-financing</b>	215 100.60	60.00
<b>Partner contribution</b>	143 400.06	
<b>Partner total eligible budget</b>	358 500.66	

Origin of partner contribution (indicative)			
Source of contribution	Legal status	% of total partner contribution	Amount
Les 7 Vents	private	10.00 %	14 340.00
ADEME, SDEM, Pays du Bessin au Virois, Region Normandie	public	80.00 %	114 720.27
Calvados Habitat	private	10.00 %	14 340.00
Sub-total public contribution		80.00 %	114 720.27
Sub-total private contribution		20.00 %	28 680.00
Total		%	143 400.27
Partner total target value			143 400.06

In-kind contribution	
Is there any in-kind contribution included in the project budget for this partner?	no

#### Partner budget - breakdown per budget line (indicative)

Staff costs	
Are you using the flat rate for staff costs?	No
Project management - WPM	34 255.26
Long Term - WPLT	79 928.94
Evaluation - WPT2	15 224.56
HeatNet Model - WPT3	79 928.94
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	22 836.84
<b>Total:</b>	<b>232 174.54</b>



Staff costs			Project management - WPM			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	Project launch	month	Period 1	2.00	3 806.14	7 612.28
	Project implementation	month	Period 2	2.00	3 806.14	7 612.28
	Project implementation	month	Period 3	2.00	3 806.14	7 612.28
	Project implementation and closure	month	Period 4	3.00	3 806.14	11 418.42
<b>Total</b>						<b>34 255.26</b>

Staff costs			Long Term - WPLT			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	Heat map + contributions to other activities	month	Period 1	3.00	3 806.14	11 418.42
	Roadmap 1st version + contributions to other activities	month	Period 2	6.00	3 806.14	22 836.84
	Local roadmap adapted + contributions to other activities	month	Period 3	6.00	3 806.14	22 836.84
	Contributions to roadmap guidance + contributions to other activities	month	Period 4	6.00	3 806.14	22 836.84
<b>Total</b>						<b>79 928.94</b>

Staff costs			Evaluation - WPT2			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	Contribution to evaluation. PLAN	month	Period 1	1.00	3 806.14	3 806.14
	DO	month	Period 2	1.00	3 806.14	3 806.14
	CHECK	month	Period 3	1.00	3 806.14	3 806.14
	ACT	month	Period 4	1.00	3 806.14	3 806.14
<b>Total</b>						<b>15 224.56</b>

Staff costs			HeatNet Model - WPT3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	Study on opportunity of the scheme + contributions to other activities	month	Period 1	3.00	3 806.14	11 418.42
	Equipment and launch of the end user campaign + contributions to other activities	month	Period 2	6.00	3 806.14	22 836.84
	Production of feedback and adaptations + contributions to other activities	month	Period 3	6.00	3 806.14	22 836.84
	Production of guidance + contributions to other activities	month	Period 4	6.00	3 806.14	22 836.84
<b>Total</b>						<b>79 928.94</b>

Staff costs			Communication - WPC			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Hourly basis	Making of general docs + webpage	month	Period 1	2.00	3 806.14	7 612.28
	Organisation of travel for stakeholders	month	Period 2	1.00	3 806.14	3 806.14
	Organisation of travel for stakeholders	month	Period 3	1.00	3 806.14	3 806.14
	Organisation of travel for stakeholders + impact documentation	month	Period 4	2.00	3 806.14	7 612.28
<b>Total</b>						<b>22 836.84</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	5 138.28
Long Term - WPLT	11 989.32
Evaluation - WPT2	2 283.68
HeatNet Model - WPT3	11 989.32
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	3 425.52
<b>Total:</b>	<b>34 826.12</b>

Travel and accommodation		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
Travel and accommodation for partner meeting participation - internal 7 Vents. 2 people 1 meeting		Period 1	2.00	750.00	1 500.00
2 people 2 meetings		Period 2	4.00	750.00	3 000.00
2 people 2 meetings		Period 3	4.00	750.00	3 000.00
2 people 2 meetings		Period 4	4.00	750.00	3 000.00
<b>Total</b>					<b>10 500.00</b>

Travel and accommodation		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
Travel and accommodation for partner meeting "on side" participation - local stakeholders.		Period 1	1.00	0.00	0.00
2 Workshops, site visits, trainings, 2 people		Period 2	4.00	750.00	3 000.00
2 Workshops, site visits, trainings, 2 people		Period 3	4.00	750.00	3 000.00
2 Workshops, site visits, trainings, 2 people		Period 4	4.00	750.00	3 000.00
<b>Total</b>					<b>9 000.00</b>

External expertise and services		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
Feasibility studies		Period 3	2.00	20 000.00	40 000.00
		Period 4	1.00	0.00	0.00
<b>Total</b>					<b>40 000.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Project french promotional documentation		Period 2	500.00	2.00	1 000.00
		Period 3	1.00	0.00	0.00
Project french promotional documentation		Period 4	500.00	2.00	1 000.00
<b>Total</b>					<b>2 000.00</b>

Equipment		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
20 apartments individual meters @ 1 500€		Period 2	20.00	1 500.00	30 000.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>30 000.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	Aberdeen City Council
<b>Partner ID</b>	11
<b>Legal status</b>	public
<b>Type of partner</b>	local public authority
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

Partner Budget		
	Amount	Co-financing Rate
<b>Programme co-financing</b>	608 485.20	60.00
<b>Partner contribution</b>	405 657.30	
<b>Partner total eligible budget</b>	1 014 142.50	

Origin of partner contribution (indicative)			
Source of contribution	Legal status	% of total partner contribution	Amount
Aberdeen City Council	public	100.00 %	405 657.00
Sub-total public contribution		100.00 %	405 657.00
Sub-total private contribution		0.00 %	0.00
Total		%	405 657.00
Partner total target value			405 657.30

In-kind contribution	
Is there any in-kind contribution included in the project budget for this partner?	no

#### Partner budget - breakdown per budget line (indicative)

Staff costs	
Are you using the flat rate for staff costs?	No
Project management - WPM	7 600.00
Long Term - WPLT	42 550.00
Evaluation - WPT2	25 900.00
HeatNet Model - WPT3	38 850.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	24 650.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	44 400.00
<b>Total:</b>	<b>183 950.00</b>

Staff costs			Project management - WPM			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	1 ACC Officer time at an average cost of 3,800 Euros	month	Period 1	0.50	3 800.00	1 900.00
	1 ACC Officer time at an average cost of 3,800 Euros	month	Period 2	0.50	3 800.00	1 900.00
	1 ACC Officer time at an average cost of 3,800 Euros	month	Period 3	0.50	3 800.00	1 900.00
	1 ACC Officer time at an average cost of 3,800 Euros	month	Period 4	0.50	3 800.00	1 900.00
					<b>Total</b>	<b>7 600.00</b>

Staff costs			Long Term - WPLT			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	ACC Project Officer time analyse, evaluate information gathered for long term impact	month	Period 1	0.00	0.00	0.00
	ACC Project Officer time analyse, evaluate information gathered for long term impact	month	Period 2	4.00	3 700.00	14 800.00
	ACC Project Officer time analyse, evaluate information gathered for long term impact	month	Period 3	4.50	3 700.00	16 650.00
	ACC Project Officer time analyse, evaluate information gathered for long term impact	month	Period 4	3.00	3 700.00	11 100.00
					<b>Total</b>	<b>42 550.00</b>

Staff costs			Evaluation - WPT2			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
	Officer time for evaluation of data at an average cost of 3,700		Period 1	1.00	0.00	0.00
	Officer time for evaluation of data at an average cost of 3,700		Period 2	1.50	3 700.00	5 550.00
	Officer time for evaluation of data at an average cost of 3,700		Period 3	3.00	3 700.00	11 100.00
	Officer time for evaluation of data at an average cost of 3,700		Period 4	2.50	3 700.00	9 250.00
					<b>Total</b>	<b>25 900.00</b>

Staff costs			HeatNet Model - WPT3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	Officer time at average 3,700 E per month to develop the HeatNet model for Aberdeen	month	Period 1	1.00	3 700.00	3 700.00
	Officer time at average 3,700 E per month to develop the HeatNet model for Aberdeen	month	Period 2	3.00	3 700.00	11 100.00
	Officer time at average 3,700 E per month to develop the HeatNet model for Aberdeen	month	Period 3	3.00	3 700.00	11 100.00
	Officer time at average 3,700 E per month to develop the HeatNet model for Aberdeen	month	Period 4	3.50	3 700.00	12 950.00
					<b>Total</b>	<b>38 850.00</b>

Staff costs			Aberdeen Living Lab - WPI3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	ACC Officer time for involvement and planning of pilot	month	Period 1	0.50	3 700.00	1 850.00
	ACC Officer time for involvement and planning of pilot	month	Period 2	2.00	3 800.00	7 600.00
	ACC Officer time for involvement and planning of pilot	month	Period 3	2.00	3 800.00	7 600.00
	ACC Officer time for involvement and planning of pilot	month	Period 4	2.00	3 800.00	7 600.00
					<b>Total</b>	<b>24 650.00</b>

Staff costs			Communication - WPC			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	1 ACC Officer/Aberdeen Heat & Power Officer time for engagement at an average cost of 3,700Euros per month for stakeholder engagement	month	Period 1	1.00	0.00	0.00
	1 ACC Officer/Aberdeen Heat & Power Officer time for engagement at an average cost of 3,700Euros per month for stakeholder engagement	month	Period 2	6.00	3 700.00	22 200.00
	1 ACC Officer/Aberdeen Heat & Power Officer time for engagement at an average cost of 3,700Euros per month for stakeholder engagement	month	Period 3	3.00	3 700.00	11 100.00
	1 ACC Officer/Aberdeen Heat & Power Officer time for engagement at an average cost of 3,700Euros per month for stakeholder engagement	month	Period 4	3.00	3 700.00	11 100.00
					<b>Total</b>	<b>44 400.00</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	1 140.00
Long Term - WPLT	6 382.50
Evaluation - WPT2	3 885.00
HeatNet Model - WPT3	5 827.50
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	3 697.50
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	6 660.00
<b>Total:</b>	<b>27 592.50</b>

Travel and accommodation		Project management - WPM				
Description	Unit type	Period	No. of units	Price per unit	Total	
2 Officers to attend PM and evaluation meetings		Period 1	2.00	500.00	1 000.00	
2 Officers to attend PM and evaluation meetings		Period 2	4.00	800.00	3 200.00	
2 Officers to attend PM and evaluation meetings		Period 3	4.00	800.00	3 200.00	
2 Officers to attend PM and evaluation meetings and Final Conference		Period 4	4.00	800.00	3 200.00	
					<b>Total</b>	<b>10 600.00</b>

External expertise and services		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Partner meeting costs Aberdeen		Period 2	1.00	1 000.00	1 000.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>1 000.00</b>

External expertise and services		Long Term - WPLT			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
External Consultant to develop Feasibility Study for Demonstration Project/ External Consultant to look at the integration and design options for 4DHC		Period 2	50.00	700.00	35 000.00
External Consultant to develop Feasibility Study for Demonstration Project/ External Consultant to look at the integration and design options for 4DHC		Period 3	70.00	700.00	49 000.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>84 000.00</b>

External expertise and services		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
Stakeholder Meetings and Information Summaries		Period 1	1.00	0.00	0.00
Stakeholder Meetings and Information Summaries		Period 2	2.00	1 500.00	3 000.00
Stakeholder Meetings and Information Summaries		Period 3	2.00	1 500.00	3 000.00
Stakeholder Meetings and Information Summaries		Period 4	2.00	1 500.00	3 000.00
				<b>Total</b>	<b>9 000.00</b>

External expertise and services		Aberdeen Living Lab - WPI3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Project Manager for the district heat network		Period 2	25.00	700.00	17 500.00
Project Manager for the district heat network		Period 3	35.00	700.00	24 500.00
Project Manager for the district heat network		Period 4	30.00	700.00	21 000.00
				<b>Total</b>	<b>63 000.00</b>

Infrastructure and works		Aberdeen Living Lab - WPI3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	0.00	0.00	0.00
Boilers (10%) Network Connection and distribution pipes (40%) Civil Works (50%)		Period 3	1.00	635 000.00	635 000.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>635 000.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	Mijnwater B.V.
<b>Partner ID</b>	12
<b>Legal status</b>	private
<b>Type of partner</b>	SME
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

<b>Partner Budget</b>		
	<b>Amount</b>	<b>Co-financing Rate</b>
<b>Programme co-financing</b>	979 147.20	60.00
<b>Partner contribution</b>	652 764.91	
<b>Partner total eligible budget</b>	1 631 912.11	

<b>Origin of partner contribution (indicative)</b>			
<b>Source of contribution</b>	<b>Legal status</b>	<b>% of total partner contribution</b>	<b>Amount</b>
Mijnwater B.V.	private	0.00 %	0.00
Province of Limburg	public	100.00 %	652 764.85
Sub-total public contribution		100.00 %	652 764.85
Sub-total private contribution		0.00 %	0.00
<b>Total</b>		<b>%</b>	<b>652 764.85</b>
<b>Partner total target value</b>			<b>652 764.91</b>

<b>In-kind contribution</b>	
Is there any in-kind contribution included in the project budget for this partner?	no

#### Partner budget - breakdown per budget line (indicative)

<b>Staff costs</b>	
Are you using the flat rate for staff costs?	Yes
Flat rate amount:	20.00
Project management - WPM	1 849.16
Long Term - WPLT	0.00
Evaluation - WPT2	2 115.40
HeatNet Model - WPT3	0.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	261 387.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	0.00
<b>Total:</b>	<b>265 351.56</b>



Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	277.36
Long Term - WPLT	0.00
Evaluation - WPT2	317.31
HeatNet Model - WPT3	0.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	39 208.04
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	0.00
<b>Total:</b>	<b>39 802.71</b>

Travel and accommodation		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
1 management meetings (nights, travel, daily all. for 2 persons)		Period 1	1.00	0.00	0.00
2 management meetings (nights, travel, daily all. for 2 persons)		Period 2	4.00	654.73	2 618.92
2 management meetings (nights, travel, daily all. for 2 persons)		Period 3	4.00	654.73	2 618.92
2 management meetings (nights, travel, daily all. for 2 persons) and a closing conference		Period 4	6.00	668.00	4 008.00
				<b>Total</b>	<b>9 245.84</b>

Travel and accommodation		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
visiting mentor sites 2 persons/2 sites		Period 2	1.00	2 859.00	2 859.00
visiting mentor sites 2 persons/2 sites		Period 3	1.00	2 859.00	2 859.00
visiting mentor sites 2 persons/2 sites		Period 4	1.00	2 859.00	2 859.00
				<b>Total</b>	<b>8 577.00</b>

Travel and accommodation		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

External expertise and services		Evaluation - WPT2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
catering & accomodation for workshop Heerlen		Period 4	1.00	2 000.00	2 000.00
				<b>Total</b>	<b>2 000.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>0.00</b>

Infrastructure and works		Heerlen Living Lab - WPI5			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Expanding Cluster D Grid: New Grid 2 Pipe system. Clusterbasements 1680 - 2520 kW: Connection to Grid, Basement Installations + construction. Multifunctional Centre Hoensbroek: New Grid 2 Pipe system. Connection to Grid + Building Energy Plant (50% cost)		Period 2	1.00	653 467.50	653 467.50
Expanding Cluster D Grid: New Grid 2 Pipe system. Clusterbasements 1680 - 2520 kW: Connection to Grid, Basement Installations + construction. Multifunctional Centre Hoensbroek: New Grid 2 Pipe system. Connection to Grid + Building Energy Plant (50% cost)		Period 3	1.00	653 467.50	653 467.50
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>1 306 935.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	South Dublin County Council
<b>Partner ID</b>	13
<b>Legal status</b>	public
<b>Type of partner</b>	local public authority
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

Partner Budget		
	Amount	Co-financing Rate
<b>Programme co-financing</b>	564 643.80	60.00
<b>Partner contribution</b>	376 429.20	
<b>Partner total eligible budget</b>	941 073.00	

Origin of partner contribution (indicative)			
Source of contribution	Legal status	% of total partner contribution	Amount
South Dublin County Council	public	100.00 %	376 429.20
Sub-total public contribution		100.00 %	376 429.20
Sub-total private contribution		0.00 %	0.00
Total		%	376 429.20
Partner total target value			376 429.20

In-kind contribution	
Is there any in-kind contribution included in the project budget for this partner?	no

#### Partner budget - breakdown per budget line (indicative)

Staff costs	
Are you using the flat rate for staff costs?	Yes
Flat rate amount:	20.00
Project management - WPM	3 600.00
Long Term - WPLT	0.00
Evaluation - WPT2	0.00
HeatNet Model - WPT3	0.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	146 340.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	3 080.00
<b>Total:</b>	<b>153 020.00</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	540.00
Long Term - WPLT	0.00
Evaluation - WPT2	0.00
HeatNet Model - WPT3	0.00
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	21 951.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	0.00
Communication - WPC	462.00
<b>Total:</b>	<b>22 953.00</b>

Travel and accommodation		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
Cost of travel to preparation meetings		Period 1	2.50	400.00	1 000.00
2 people attending 2 partner meetings		Period 2	4.00	750.00	3 000.00
2 people attending 2 partner meetings		Period 3	4.00	750.00	3 000.00
2 people attending 2 partner meetings and 1 Final Conference		Period 4	6.00	750.00	4 500.00
<b>Total</b>					<b>11 500.00</b>

Travel and accommodation		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Travel Costs for regional events for 4 people		Period 2	4.00	250.00	1 000.00
Travel Costs for regional events for 4 people		Period 3	4.00	250.00	1 000.00
4 Representatives on study visits		Period 4	4.00	600.00	2 400.00
<b>Total</b>					<b>4 400.00</b>

External expertise and services		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
FLC cost of €750 per payment claim		Period 1	1.00	750.00	750.00
FLC cost of €750 per payment claim (2 claims)		Period 2	2.00	750.00	1 500.00
FLC cost of €750 per payment claim (2 claims)		Period 3	2.00	750.00	1 500.00
2 Payment Claims @ €750 each and an on the spot check at €1,250.		Period 4	2.00	1 375.00	2 750.00
<b>Total</b>					<b>6 500.00</b>

External expertise and services		South Dublin Living Lab - WPI2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Feasibility of various supply options and Monitoring @ 800 per day		Period 2	13.00	800.00	10 400.00
Scoping of groundworks, Monitoring @ 800 per day		Period 3	13.00	800.00	10 400.00
Monitoring & Evaluation @ 800 per day		Period 4	13.00	800.00	10 400.00
<b>Total</b>					<b>31 200.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	0.00	0.00
1 seminar participation		Period 3	1.00	1 000.00	1 000.00
"1 partner meeting hosting@ 5k 1 seminar participation @ 1k 1 printing costs @ 3k 1 Poster print @ 1k"		Period 4	4.00	2 500.00	10 000.00
				<b>Total</b>	<b>11 000.00</b>

Equipment		South Dublin Living Lab - WPI2			
Description	Unit type	Period	No. of units	Price per unit	Total
5 Monitoring tools @ €2,500 each		Period 1	5.00	2 500.00	12 500.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>12 500.00</b>

Infrastructure and works		South Dublin Living Lab - WPI2			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
Contract costs for pipeline purchase and installation from energy centre to hospital and energy centre to County Hall. Additional costs for purchase and installation of heat exchangers (approx €95,000)		Period 2	1.00	150 000.00	150 000.00
Contract costs for pipeline purchase and installation from energy centre to hospital and energy centre to County Hall. Additional costs for purchase and installation of heat exchangers (approx €95,000)		Period 3	1.00	300 000.00	300 000.00
Contract costs for pipeline purchase and installation from energy centre to hospital and energy centre to County Hall. Additional costs for purchase and installation of heat exchangers (approx €95,000)		Period 4	1.00	238 000.00	238 000.00
				<b>Total</b>	<b>688 000.00</b>

#printPartnerSumBudget( \$partner )

<b>Name of partner organisation</b>	Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement
<b>Partner ID</b>	14
<b>Legal status</b>	public
<b>Type of partner</b>	local public authority
<b>Co-financing source</b>	ERDF
<b>Outside (the Union part of) the programme area</b>	No

Partner Budget		
	Amount	Co-financing Rate
<b>Programme co-financing</b>	116 239.20	60.00
<b>Partner contribution</b>	77 492.63	
<b>Partner total eligible budget</b>	193 731.83	

Origin of partner contribution (indicative)			
Source of contribution	Legal status	% of total partner contribution	Amount
Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement	public	0.00 %	0.00
French Environment Ministry	public	100.00 %	77 492.74
Sub-total public contribution		100.00 %	77 492.74
Sub-total private contribution		0.00 %	0.00
Total		%	77 492.74
Partner total target value			77 492.63

In-kind contribution	
Is there any in-kind contribution included in the project budget for this partner?	no

#### Partner budget - breakdown per budget line (indicative)

Staff costs	
Are you using the flat rate for staff costs?	No
Project management - WPM	11 070.73
Long Term - WPLT	31 428.30
Evaluation - WPT2	8 198.67
HeatNet Model - WPT3	74 471.41
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	13 117.88
Communication - WPC	9 565.11
<b>Total:</b>	<b>147 852.10</b>

Staff costs			Project management - WPM			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	the price/unit cost is the monthly average employee cost for the 2 employees of the cerema that will work on the heatnet project :	month	Period 1	0.24	6 832.24	1 639.73
	the price/unit cost is the monthly average employee cost for the 2 employees of the cerema that will work on the heatnet project :	month	Period 2	0.48	6 832.24	3 279.47
	the price/unit cost is the monthly average employee cost for the 2 employees of the cerema that will work on the heatnet project :	month	Period 3	0.48	6 832.24	3 279.47
	the price/unit cost is the monthly average employee cost for the 2 employees of the cerema that will work on the heatnet project :	month	Period 4	0.42	6 838.24	2 872.06
					<b>Total</b>	<b>11 070.73</b>

Staff costs			Long Term - WPLT			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time		month	Period 1	0.60	6 832.24	4 099.34
		month	Period 2	3.00	6 832.24	20 496.72
		month	Period 3	0.50	6 832.24	3 416.12
		month	Period 4	0.50	6 832.24	3 416.12
					<b>Total</b>	<b>31 428.30</b>

Staff costs			Evaluation - WPT2			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time		month	Period 1	0.00	6 832.24	0.00
		month	Period 2	0.40	6 832.24	2 732.89
		month	Period 3	0.20	6 832.24	1 366.44
		month	Period 4	0.60	6 832.24	4 099.34
					<b>Total</b>	<b>8 198.67</b>

Staff costs			HeatNet Model - WPT3			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	lead heatnet wp : 10 days. non technical guide to DHC : 60 days. extend tool to economically compare dhc with conventional heating : 50 days. Heat mapping tool : 60 days. average day per month : 16,6.	month	Period 1	0.90	6 832.24	6 149.01
	lead heatnet wp : 10 days. non technical guide to DHC : 60 days. extend tool to economically compare dhc with conventional heating : 50 days. Heat mapping tool : 60 days. average day per month : 16,6.	month	Period 2	2.00	6 832.24	13 664.48
	lead heatnet wp : 10 days. non technical guide to DHC : 60 days. extend tool to economically compare dhc with conventional heating : 50 days. Heat mapping tool : 60 days. average day per month : 16,6.	month	Period 3	2.00	6 832.24	13 664.48
	lead heatnet wp : 10 days. non technical guide to DHC : 60 days. extend tool to economically compare dhc with conventional heating : 50 days. Heat mapping tool : 60 days. average day per month : 16,6.	month	Period 4	6.00	6 832.24	40 993.44
					<b>Total</b>	<b>74 471.41</b>

Staff costs			Boulogne sur Mer Living Lab - WPI6			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	bilateral support for the local roadmap of boulogne	month	Period 1	0.18	6 832.24	1 229.80
	bilateral support for the local roadmap of boulogne	month	Period 2	1.20	6 832.24	8 198.68
	bilateral support for the local roadmap of boulogne	month	Period 3	0.18	6 832.24	1 229.80
	bilateral support for the local roadmap of boulogne	month	Period 4	0.36	6 832.24	2 459.60
					<b>Total</b>	<b>13 117.88</b>

Staff costs			Communication - WPC			
Type of staff	Comments	Unit type	Period	No. of units	Price per unit	Total
Full-time	Participation in communications work plan	month	Period 1	0.40	6 832.24	2 732.89
	Contribution to transnational communication activities	month	Period 2	0.20	6 832.24	1 366.44
	Contribution to transnational communication activities	month	Period 3	0.20	6 832.24	1 366.44
	Contribution to transnational communication activities and final conference with requisite dissemination activity.	month	Period 4	0.60	6 832.24	4 099.34
					<b>Total</b>	<b>9 565.11</b>

Office and administration costs - real costs	
Are you using the flat rate for office and administration costs?	Yes
Flat rate percentage:	15.00 %
Project management - WPM	1 660.59
Long Term - WPLT	4 714.22
Evaluation - WPT2	1 229.79
HeatNet Model - WPT3	11 170.70
Plymouth Living Lab - WPI1	0.00
South Dublin Living Lab - WPI2	0.00
Aberdeen Living Lab - WPI3	0.00
Kortrijk Living Lab - WPI4	0.00
Heerlen Living Lab - WPI5	0.00
Boulogne sur Mer Living Lab - WPI6	1 967.68
Communication - WPC	1 434.75
<b>Total:</b>	<b>22 177.73</b>

Travel and accommodation		Project management - WPM				
Description	Unit type	Period	No. of units	Price per unit	Total	
meeting herleen and aberdeen		Period 1	1.00	1 520.00	1 520.00	
meeting boulogne and plymouth		Period 2	1.00	2 400.00	2 400.00	
meeting Kortrijk		Period 3	1.00	1 770.00	1 770.00	
Final conference		Period 4	2.00	880.00	1 760.00	
					<b>Total</b>	<b>7 450.00</b>



Travel and accommodation		HeatNet Model - WPT3			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
meeting with Codema and Universities		Period 2	1.00	1 520.00	1 520.00
meeting with Codema and Universities		Period 3	1.00	1 520.00	1 520.00
meeting with Codema and Universities		Period 4	2.00	1 520.00	3 040.00
				<b>Total</b>	<b>6 080.00</b>

Travel and accommodation		Boulogne sur Mer Living Lab - WPI6			
Description	Unit type	Period	No. of units	Price per unit	Total
Site visits		Period 1	4.00	250.00	1 000.00
		Period 2	1.00	0.00	0.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>1 000.00</b>

Travel and accommodation		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
		Period 2	1.00	490.00	490.00
		Period 3	1.00	0.00	0.00
		Period 4	1.00	490.00	490.00
				<b>Total</b>	<b>980.00</b>

External expertise and services		Project management - WPM			
Description	Unit type	Period	No. of units	Price per unit	Total
first level control costs		Period 1	1.00	0.00	0.00
first level control costs		Period 2	2.00	659.00	1 318.00
first level control costs		Period 3	2.00	659.00	1 318.00
first level control costs		Period 4	2.00	659.00	1 318.00
				<b>Total</b>	<b>3 954.00</b>

External expertise and services		Communication - WPC			
Description	Unit type	Period	No. of units	Price per unit	Total
		Period 1	1.00	0.00	0.00
french conference		Period 2	1.00	0.00	0.00
french conference		Period 3	1.00	4 238.00	4 238.00
		Period 4	1.00	0.00	0.00
				<b>Total</b>	<b>4 238.00</b>

#printPartnerSumBudget( \$partner )

### Periods

Period number	Duration (months)	Start date	End date	Reporting date
1	1	Sep-2016	Dec-2016	Dec-2016
2	1	Jan-2017	Dec-2017	Dec-2017
3	1	Jan-2018	Dec-2018	Dec-2018
4	1	Jan-2019	Jul-2020	Aug-2019

## Activities outside the programme area

What is the added value of activities to be carried out outside programme area? If applicable, please list the relevant activities and describe how they will benefit the programme area.

Total budget	0.00
ERDF outside	0.00
% of total ERDF	0.00

## Project Budget

### Project budget per co-financing source (fund) - breakdown per partner

Partner			Programme co-financing			Contribution			Total eligible
Partner nr	Partner abbreviation	Country	ERDF	ERDF co-financing (percent)	Percentage of total ERDF	Public contribution	Private contribution	Total contribution	
1 -	Codema	IE	690 253.51	60.00 %	9.98 %	0.00	460 169.01	460 169.01	1 150 422.52
2 -	PCC	UK	1 045 401.35	60.00 %	15.12 %	696 934.24	0.00	696 934.24	1 742 335.59
3 -	CAP 2020	BE	241 813.10	60.00 %	3.50 %	120 906.56	40 302.18	161 208.74	403 021.84
4 -	Kortrijk	BE	809 401.50	60.00 %	11.71 %	539 601.00	0.00	539 601.00	1 349 002.50
5 -	Leiedal	BE	179 850.00	60.00 %	2.60 %	119 900.00	0.00	119 900.00	299 750.00
6 -	ECN	FR	190 009.50	60.00 %	2.75 %	0.00	126 673.00	126 673.00	316 682.50
7 -	BsM	FR	846 293.76	60.00 %	12.24 %	564 195.84	0.00	564 195.84	1 410 489.60
8 -	UoG	BE	210 183.00	60.00 %	3.04 %	140 122.00	0.00	140 122.00	350 305.00
9 -	HvA	NL	217 089.52	60.00 %	3.14 %	144 726.36	0.00	144 726.36	361 815.88
10 -	L7V	FR	215 100.39	60.00 %	3.11 %	114 720.27	28 680.00	143 400.27	358 500.66
11 -	ACC	UK	608 485.50	60.00 %	8.80 %	405 657.00	0.00	405 657.00	1 014 142.50
12 -	Mijnwater	NL	979 147.26	60.00 %	14.16 %	652 764.85	0.00	652 764.85	1 631 912.11
13 -	SDCC	IE	564 643.80	60.00 %	8.17 %	376 429.20	0.00	376 429.20	941 073.00
14 -	CER	FR	116 239.09	60.00 %	1.68 %	77 492.74	0.00	77 492.74	193 731.83
Sub-total for partners inside			6 913 911.28	--	100.00 %	3 953 450.06	655 824.19	4 609 274.25	11 523 185.53
Sub-total for partners outside			0.00	--	0.00 %	0.00	0.00	0.00	0.00
Total			6 913 911.28	--	100.00 %	3 953 450.06	655 824.19	4 609 274.25	11 523 185.53

### Project budget - overview per partner / per budget line

Partner abbreviation	Co-financing Source	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Total budget	Net revenue	Total eligible
Codema	ERDF	852 150.00	127 822.50	18 200.02	152 250.00	0.00	0.00	1 150 422.52	0.00	1 150 422.52
PCC	ERDF	283 306.60	42 495.99	12 680.00	249 298.00	1 200.00	1 153 355.00	1 742 335.59	0.00	1 742 335.59
CAP 2020	ERDF	274 862.50	41 229.34	27 500.00	59 430.00	0.00	0.00	403 021.84	0.00	403 021.84
Kortrijk	ERDF	219 350.00	32 902.50	12 750.00	404 000.00	80 000.00	600 000.00	1 349 002.50	0.00	1 349 002.50
Leiedal	ERDF	210 000.00	31 500.00	11 000.00	47 250.00	0.00	0.00	299 750.00	0.00	299 750.00
ECN	ERDF	261 200.00	39 180.00	16 302.50	0.00	0.00	0.00	316 682.50	0.00	316 682.50
BsM	ERDF	150 864.00	22 629.60	6 821.00	237 900.00	17 275.00	975 000.00	1 410 489.60	0.00	1 410 489.60
UoG	ERDF	273 900.00	41 085.00	16 320.00	19 000.00	0.00	0.00	350 305.00	0.00	350 305.00
HvA	ERDF	283 753.02	42 562.86	17 500.00	18 000.00	0.00	0.00	361 815.88	0.00	361 815.88
L7V	ERDF	232 174.54	34 826.12	19 500.00	42 000.00	30 000.00	0.00	358 500.66	0.00	358 500.66
ACC	ERDF	183 950.00	27 592.50	10 600.00	157 000.00	0.00	635 000.00	1 014 142.50	0.00	1 014 142.50
Mijnwater	ERDF	265 351.56	39 802.71	17 822.84	2 000.00	0.00	1 306 935.00	1 631 912.11	0.00	1 631 912.11
SDCC	ERDF	153 020.00	22 953.00	15 900.00	48 700.00	12 500.00	688 000.00	941 073.00	0.00	941 073.00
CER	ERDF	147 852.10	22 177.73	15 510.00	8 192.00	0.00	0.00	193 731.83	0.00	193 731.83
Total		3 791 734.32	568 759.85	218 406.36	1 445 020.00	140 975.00	5 358 290.00	11 523 185.53	0.00	11 523 185.53
Percentage of total budget		32.91 %	4.94 %	1.90 %	12.54 %	1.22 %	46.50 %	100.00 %	0.00 %	100.00 %

Co-financing source	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Sum financed budget	Decreasing net revenue	Total financed budget
ERDF	3 791 734.32	568 759.85	218 406.36	1 445 020.00	140 975.00	5 358 290.00	11 523 185.53	0.00	11 523 185.53
ERDF equivalent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Project budget - overview per WP / per budget line**

WP number	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Total budget	Net revenue	Total eligible
WP M	749 384.84	112 407.66	140 419.86	105 034.00	1 275.00	0.00	1 108 521.36	0.00	1 108 521.36
WP LT	700 398.57	105 059.71	20 502.50	308 140.00	0.00	0.00	1 134 100.78	0.00	1 134 100.78
WP T2	368 903.19	55 335.44	14 992.00	93 500.00	0.00	0.00	532 730.63	0.00	532 730.63
WP T3	503 046.11	75 456.85	16 564.00	115 876.00	30 000.00	0.00	740 942.96	0.00	740 942.96
WP I1	250 583.40	37 587.51	0.00	99 562.00	0.00	1 153 355.00	1 541 087.91	0.00	1 541 087.91
WP I2	243 240.00	36 486.00	0.00	45 200.00	12 500.00	688 000.00	1 025 426.00	0.00	1 025 426.00
WP I3	24 650.00	3 697.50	0.00	63 000.00	0.00	635 000.00	726 347.50	0.00	726 347.50
WP I4	339 530.00	50 929.50	0.00	358 400.00	80 000.00	600 000.00	1 428 859.50	0.00	1 428 859.50
WP I5	261 387.00	39 208.04	0.00	0.00	0.00	1 306 935.00	1 607 530.04	0.00	1 607 530.04
WP I6	51 197.88	7 679.68	2 568.00	130 000.00	17 200.00	975 000.00	1 183 645.56	0.00	1 183 645.56
WP C	299 413.33	44 911.96	23 360.00	126 308.00	0.00	0.00	493 993.29	0.00	493 993.29
<b>Total</b>	<b>3 791 734.32</b>	<b>568 759.85</b>	<b>218 406.36</b>	<b>1 445 020.00</b>	<b>140 975.00</b>	<b>5 358 290.00</b>	<b>11 523 185.53</b>	<b>0.00</b>	<b>11 523 185.53</b>
Percentage of total budget	32.91 %	4.94 %	1.90 %	12.54 %	1.22 %	46.50 %		0.00 %	100.00 %

Co-financing source	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Sum financed budget	Decreasing net revenue	Total financed budget
ERDF	3 791 734.32	568 759.85	218 406.36	1 445 020.00	140 975.00	5 358 290.00	11 523 185.53	0.00	11 523 185.53
ERDF equivalent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Project budget - overview per WP / per period**

WP number	Period 1	Period 2	Period 3	Period 4	Total budget	Net revenue	Total eligible
WP M	114 596.32	303 774.95	309 473.24	380 676.85	1 108 521.36	0.00	1 108 521.36
WP LT	70 314.42	269 869.76	430 163.81	363 752.79	1 134 100.78	0.00	1 134 100.78
WP T2	24 853.77	196 306.08	173 691.02	137 879.76	532 730.63	0.00	532 730.63
WP T3	52 024.66	242 544.91	251 559.95	194 813.44	740 942.96	0.00	740 942.96
WP I1	0.00	48 984.75	332 710.08	1 159 393.08	1 541 087.91	0.00	1 541 087.91
WP I2	15 375.00	235 667.00	426 722.00	347 662.00	1 025 426.00	0.00	1 025 426.00
WP I3	2 127.50	26 240.00	668 240.00	29 740.00	726 347.50	0.00	726 347.50
WP I4	8 625.00	444 249.00	414 591.00	561 394.50	1 428 859.50	0.00	1 428 859.50
WP I5	0.00	803 765.02	803 765.02	0.00	1 607 530.04	0.00	1 607 530.04
WP I6	7 402.27	270 696.48	600 948.27	304 598.54	1 183 645.56	0.00	1 183 645.56
WP C	47 131.44	112 928.45	127 596.45	206 336.95	493 993.29	0.00	493 993.29
Percentage of total budget	2.97 %	25.64 %	39.39 %	31.99 %	100.00 %	0.00 %	100.00 %

### In-kind contribution

Partner nr	Partner abbreviation	Amount
1	Codema	0,00
2	PCC	0,00
3	CAP 2020	0,00
4	Kortrijk	0,00
5	Leiedal	0,00
6	ECN	0,00
7	BsM	0,00
8	UoG	0,00
9	HvA	0,00
10	L7V	0,00
11	ACC	0,00
12	Mijnwater	0,00
13	SDCC	0,00
14	CER	0,00
<b>Total</b>		<b>0.00</b>
<b>Percentage of total budget</b>		<b>0.00 %</b>

Co-financing source	Amount
ERDF	0.00
<b>Total EU funds</b>	<b>0.00</b>
ERDF equivalent	0.00

### Lead applicant confirmation

By submitting the application form the Lead Partner on behalf of all partners confirms that:

- the project is in line with the relevant EU and national and regional legislation and policies of the regions and countries involved;
- the Lead Partner and the project partners will act according to the provisions of the relevant national and EU regulations, especially regarding structural funds, public procurement, state aid, equal opportunities and sustainable development, as well as the specific provisions of the programme;
- the information in the application form is accurate and true to the best knowledge of the lead partner.

## ABERDEEN CITY COUNCIL

<b>COMMITTEE</b>	Strategic Commissioning
<b>DATE</b>	7 June 2018
<b>REPORT TITLE</b>	Schoolhill Public Realm Enhancement
<b>REPORT NUMBER</b>	RES/18/033
<b>DIRECTOR</b>	Steve Whyte
<b>CHIEF OFFICER</b>	Stephen Booth
<b>REPORT AUTHOR</b>	Scott Davidson
<b>TERMS OF REFERENCE</b>	Purpose – 2 Remit – 3.4

### 1. PURPOSE OF REPORT

- 1.1 To seek approval for the implementation of the first stage of a public realm enhancement at Schoolhill.

### 2. RECOMMENDATION(S)

That the Committee:

- 2.1 Approve the Business Case and the budget for the proposed works.
- 2.2 Delegate authority to the Chief Officer - Capital, following consultation with the Head of Commercial and Procurement Services, to procure the first stage public realm enhancement, including all necessary consents, licenses, orders and agreements for the area in front of Aberdeen Art Gallery subject to approval of the funding of £550,000 by the City Growth and Resources Committee on 19 June 2018.
- 2.3 Delegate authority to the Chief Officer – Place to bring forward a comprehensive public realm enhancement design for the wider Schoolhill area as future stages of works and report to appropriate committees; and
- 2.4 Instruct the Director of Resources to apply for appropriate external grant funding for design costs of £30,000.

### 3. BACKGROUND AND MAIN ISSUES

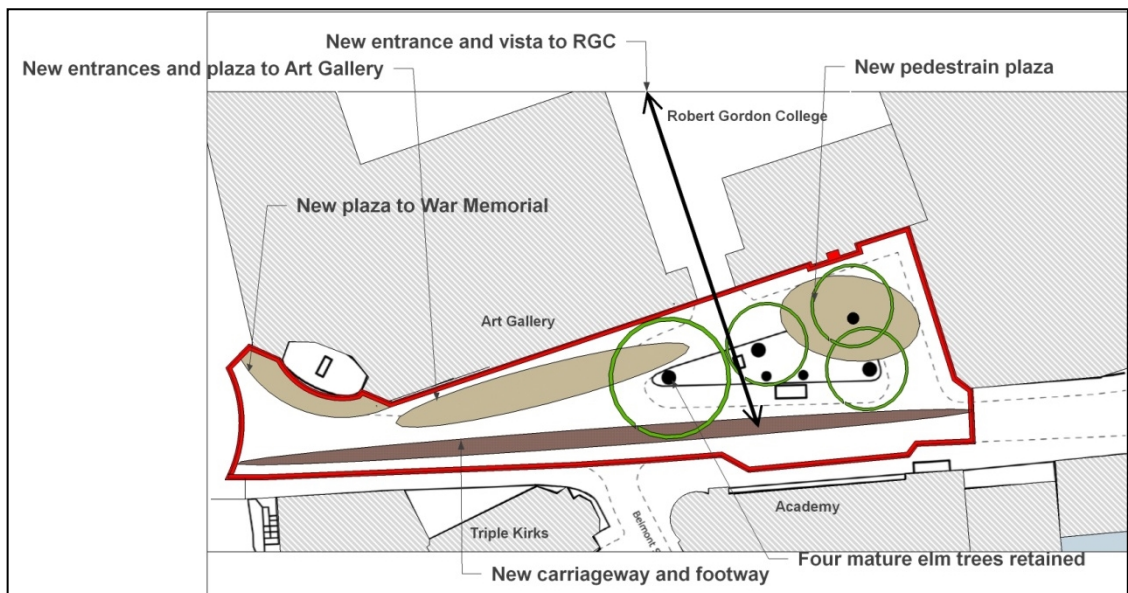
- 3.1 At its meeting on 7 June 2016, the Finance, Policy and Resources Committee resolved to:

- a. Agree that the City Centre Masterplan public realm proposals at Golden Square and Schoolhill Pocket Park were also important to secure the long-term transformation of the city centre.
- b. Agree that detailed design proposals for both Golden Square and Schoolhill Pocket Park be procured from specialist consultants.
- c. Agree to delegate authority to the City Centre Director in consultation with the Depute Leader of the Council and the Convener of Finance Policy and Resources for up to £2 million of expenditure to implement the Union Street package of works together with the Union Terrace Gardens, Golden Square and Schoolhill Pocket Park design proposals.

3.2 At its meeting on 23 May 2018, the Capital Programme Committee resolved:

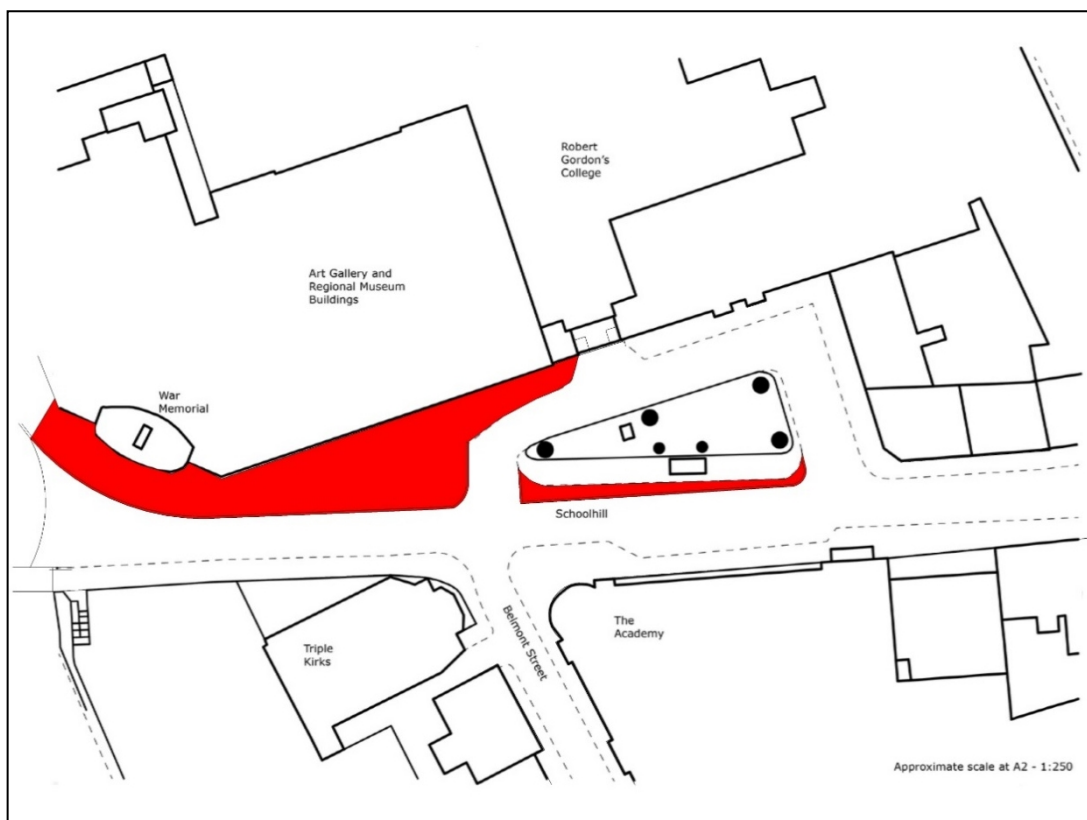
- a. Note that the Business Case for Schoolhill Public Realm Enhancement has been considered and agreed for their interest by the City Centre Masterplan Board and Capital Board.
- b. Note the authorisation for the preparation of detailed design of Schoolhill public realm by Finance, Policy and Resources Committee on 7 June, 2016.
- c. Approve the first stage Schoolhill Public Realm Enhancement project as an addition to the Capital Programme and notes the estimated costs in Section 4 which shall be considered by Strategic Commissioning Committee on 7 June 2018 and City Growth and Resources Committee on 19 June 2018 and for the works to be complete by the beginning of 2019.
- d. Refer the report to the Strategic Commissioning Committee on 7 June 2018 to consider the recommendations presented at 2.1 – 2.4 above.
- e. Refer the report to the City Growth and Resources Committee on 19 June, 2018 for approval of a project budget of £550,000 to be met from the Non-Housing Capital Programme.

3.3 Figure 1 presents the scope of a comprehensive urban realm enhancement project for Schoolhill. The high level principles include establishing a new entrance to Aberdeen Art Gallery, the potential for an improved plaza to the Cowdray Hall war memorial, creating a new access route to Robert Gordon's College, creating an appropriate plaza adjacent to the Robert Gordon University buildings, retaining appropriate mature trees and the Victoria Cross memorial in addition to reconfiguring the Schoolhill carriageway to support active travel recognising that it is part of the national cycle network.



**Figure 1 – Key Structural Elements for Schoolhill Public Realm Enhancement**

- 3.4 As a development of the City Centre Masterplan the urban realm enhancement must be accessible to all and safely resolve the current place and movement conflicts enabling people to walk and cycle, as well as use bus and car access, in what is a key destination place for the city centre. The project should be an exemplar for city centre public realm provision.
- 3.5 A clear contribution to city centre place-making needs to show a creative and integrated approach to urban design and travel management. The enhancement will help to create a significantly improved urban environment that delivers on the City Centre Masterplan objective of promoting the city centre as an inclusive and attractive place where people will want to live, work and visit.
- 3.6 The area is a primary place in the city centre serving several important destinations with significant pedestrian activity. The footfall is set to grow substantially with the re-opened Art Gallery in 2019 anticipating 350,000 visitors a year, the residential development at Triple Kirks anticipating over 450 residents and staff as well as the likely re-use of the currently vacant Robert Gordon University buildings and the on-going needs of Robert Gordon's College. The immediate vicinity includes the Academy (retail and leisure) as well as the adjacency of Belmont Street.
- 3.7 The first stage of Schoolhill public realm enhancement encompasses the road, footways and small plaza in front of Aberdeen Art Gallery and Robert Gordon's College as shown in Figure 2.



**Figure 2 – Schoolhill Public Realm Site**

- 3.8 During 2016 and 2017 options for the public realm enhancement were developed and consultations were undertaken with key stakeholders. This resulted in extensive and positive dialogue with Robert Gordon's College (RGC), particularly in 2017.
- 3.9 In developing the first stage project for the area in the forthcoming weeks, engagement will continue with Robert Gordon's College, Robert Gordon University, the Disability Equity Partnership, the City Centre Community Council and the Aberdeen Civic Forum, etc. Upon approval the future compressive public realm project will be subject to continued stakeholder engagement.
- 3.10 The first stage project will be developed, designed, costed and procured through an in-house team. This team will secure all necessary consents and will also manage the tendering for, appointment and supervision of contractors to undertake the work for completion in early 2019.

#### **4. FINANCIAL IMPLICATIONS**

- 4.1 Funding of £550,000 (as advised by Faithful and Gould) would be required from the Council's non-housing capital programme to implement the first stage. The City Growth and Resources Committee on 19 June, 2018 will consider approval of a project budget of £550.000 to be met from the Non-Housing Capital Programme. An application for external funding to Community Links of £30,000 as a contribution to design costs will be made.



## 5. LEGAL IMPLICATIONS

5.1 There are no direct legal implications arising from the recommendations of this report.

## 6. MANAGEMENT OF RISK

	Risk	Low (L), Medium (M), High (H)	Mitigation
<b>Financial</b>	Overspend	L	Active project management and costing during design to ensure project delivers within budget
<b>Legal</b>	None		
<b>Employee</b>	Key project staff leave Council	L	Use notice period to redirect staff or secure external support
<b>Customer</b>	Maintaining stakeholder engagement and support	M	Active engagement with stakeholders with clear responsibility to Project Manager
<b>Environment</b>	None		
<b>Technology</b>	None		
<b>Reputational</b>	Lack of implementation timeously	L	Active project management and early delivery through staging

## 7. OUTCOMES

Local Outcome Improvement Plan Themes	
	Impact of Report
<b>Prosperous Economy</b>	Investment in infrastructure – enhancement of the public realm at Schoolhill will represent a transformational enhancement in the city centre infrastructure and active travel
<b>Prosperous People</b>	Protected from Harm – the scheme will increase safety for all in a vital and vibrant area of the city centre
<b>Prosperous Place</b>	People friendly city – the enhancement of the public realm will help to develop the city centre as a people focused place that encourages sustainable travel options; particularly walking and cycling. It will also create a place designed for people that can demonstrate a creative and integrated approach to high quality urban design

## 8. IMPACT ASSESSMENTS

Assessment	Outcome
<b>Equality &amp; Human Rights Impact Assessment</b>	Provided at Appendix 2
<b>Privacy Impact Assessment</b>	Not required
<b>Duty of Due Regard / Fairer Scotland Duty</b>	Not applicable

## 9. BACKGROUND PAPERS

Aberdeen City Centre Masterplan and Delivery Programme  
FP&R Committee 7 June 2016 – Strategic Infrastructure Plan – CG/16/077  
Capital Programme Committee 23 May 2018 – Schoolhill Public Realm Enhancement - RES/18/018

## 10. APPENDICES

Appendix 1 – Schoolhill Public Real Enhancement Business Case  
Appendix 2 – Equality & Human Rights Impact Assessment

## 11. REPORT AUTHOR CONTACT DETAILS

Scott Davidson  
City Centre Masterplan Programme Manager  
scodavidson@aberdeencity.gov.uk  
07833 40 22 12

<b>Project Name</b>	Schoolhill Public Realm Enhancement	<b>Date</b>	16 April, 2018
<b>Author</b>	Scott Davidson	<b>Version</b>	1

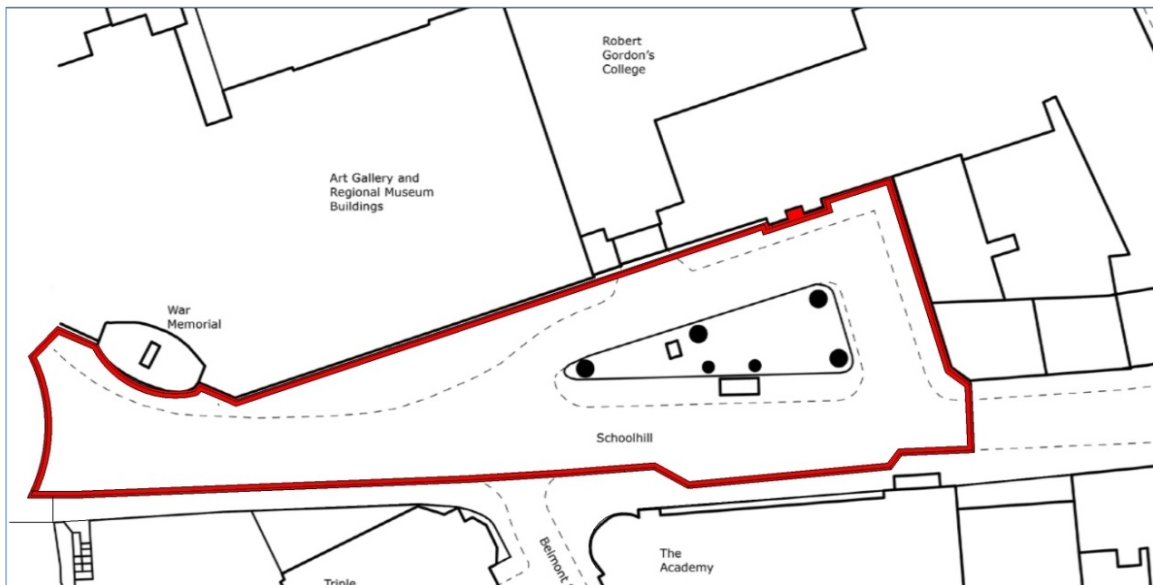
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**1. Business Need**

At its meeting on 7 June 2016, the Finance, Policy and Resources Committee resolved, amongst other things, to agree that the City Centre Masterplan public realm proposals at Schoolhill Pocket Park were important to secure the long-term transformation of the city centre. The Committee also agreed that detailed design proposals for Schoolhill Pocket Park be procured.

Schoolhill public realm is the road, footways and small piazza in front of Aberdeen Art Gallery and Robert Gordon’s College as shown in Figure 1.



**Figure 1 – Schoolhill Public Realm Site**

This contributes to the delivery of City Centre Masterplan.

In addition enhancements to the public realm will provide a setting for refurbished Aberdeen Art Gallery which is projected to receive 350,000 visitors per annum. Further, around 1,500 staff and students from Robert Gordon’s College use this area each day and there is an opportunity to make the area safer. Also, Schoolhill is part of the National Cycle Network and investment in this infrastructure will help promote active travel.

**2. Objectives**

The scheme must be accessible to all and enable people to walk and cycle safely balanced with bus and car access in what will be a key destination place for the city centre. It should act as an exemplar in this regard and in city centre public realm provision. A clear contribution to place needs to be demonstrated that shows a creative and integrated approach to urban design and travel management. The scheme will help to create an enabling environment that delivers on the City Centre Masterplan objective of promoting the view of Aberdeen city centre as an energetic, inclusive and fascinating place where people will want to live, work and visit – changing perception. It must be attractive to people regardless of interests or means.


**3. Options Appraisal**

**3.1 Option 1 – Do Nothing / Do Minimum**

<b>Description</b>	Undertake public realm enhancements within the footway in front of Aberdeen Art Gallery
<b>Expected Costs</b>	£550,000
<b>Risks Specific to this Option</b>	Project delays due to potential archaeological discoveries
<b>Advantages &amp; Disadvantages</b>	<p>Advantages – Provides small impact to improve access to Aberdeen Art Gallery. Quickness of implementation, minimal traffic impact and general disruption.</p> <p>Disadvantages – Limited impact on changing perceptions of the city centre. Lack of integration of urban design and travel management. Does not address vehicular congestion and inappropriate vehicle waiting.</p> <p>Opportunity lost – Option 1 will limit the creation of a key destination for the city centre and not support active travel.</p>
<b>Other Points</b>	None

**3.2 Option 2 – Mid-Level Scheme**

<b>Description</b>	Option 1 + Refurbishment of piazza at Robert Gordon's College
<b>Expected Costs</b>	£1m - £1.5m
<b>Risks Specific to this Option</b>	Project delays due to potential archaeological discoveries
<b>Advantages &amp; Disadvantages</b>	<p>Advantages – Provides small impact to improve access to Aberdeen Art Gallery and to piazza. Potential site for cycle hire drop-off. Limited traffic disruption.</p> <p>Disadvantages – Limited impact on changing perceptions of the city centre. Lack of integration of urban design and travel management. Does not address vehicular congestion and inappropriate vehicle waiting. Likely to reduce or lose disabled parking at Schoolhill.</p> <p>Opportunity lost – Option 2 will limit the creation of a key</p>

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	<p>destination for the city centre as it will not represent transformational change; rather it will build on the existing elements. It will not support active travel.</p>
<p><b>Other Points</b></p>	<p>None</p>

<p><b>3.3 Option 3 – Full Scheme</b></p>	
<p><b>Description</b></p>	<p>Options 1 and 2 above + addressing active travel infrastructure improvement on existing highway.</p>
<p><b>Expected Costs</b></p>	<p>£2.55m</p>
<p><b>Risks Specific to this Option</b></p>	<p>Project delays due to potential archaeological discoveries. Traffic Regulation Order processes</p>
<p><b>Advantages &amp; Disadvantages</b></p>	<p>Advantages – Creates a scheme accessible to all (including potential site for cycle hire drop-off) that allows people to walk and cycle safely balanced with bus and car access as well as accommodating disabled parking provision. Allows the creation of a key destination place for the city centre that can become an exemplar in city centre public realm provision across Scotland through a creative and integrated approach to urban design and travel management. It will be attractive to people regardless of interests or means. Addresses public access to Cowdray Hall and Art Gallery; also allows the City to consider future significant outdoor art commissions and aligns with the ‘Aberdeen in Colour’ aspirations for Belmont Street by offering opportunity to extend reach into Schoolhill</p> <p>The scheme, for this area, will help to create an enabling environment that delivers on the City Centre Masterplan objective of promoting the view of Aberdeen city centre as an energetic, inclusive and fascinating place where people will want to live, work and visit – changing perception.</p> <p>Disadvantages – Longer implementation period due to regulatory requirements.</p>
<p><b>Other Points</b></p>	<p>Any other relevant information.</p>

**3.4 Scoring of Options Against Objectives**

Use the table below to score options against the objectives in order to create a shortlist of options to be considered.

Objectives	Options Scoring Against Objectives		
	1	2	3
<b>Accessible to all</b>	3	3	3
<b>Walk and cycle safely</b>	1	1	3
<b>Balanced approach for all travel modes</b>	0	0	3
<b>Key destination place</b>	2	2	3
<b>City centre public realm exemplar</b>	0	1	3
<b>Creative and integrated approach to urban design and travel management</b>	0	0	3
<b>Changing perception</b>	1	2	3
<b>Attractive regardless of interests or means</b>	0	1	2
<b>Total</b>	7	10	23
<b>Ranking</b>	<b>3</b>	<b>2</b>	<b>1</b>

**Scoring**


Fully Delivers = 3

Mostly Delivers = 2

Delivers to a Limited Extent = 1

Does not Deliver = 0

Will have a negative impact on objective = -1

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<b>3.5 Recommendation</b>
<p>Pursue a full scheme for Schoolhill public realm enhancement with delivery in stages. Stage 1 – Western section, Stage 2 on the highway of Schoolhill and Stage 3 at the piazza area in front of Robert Gordon’s College.</p>

<b>4. Scope</b>
<p>The project will produce a key public realm space befitting of its surrounding cultural, educational and commercial uses. This will be a key destination space that will contribute to the CCMP objective of changing perceptions. The area will become a safer place for walking and cycling. Benefits will accrue to the city’s cultural offer and the safe movement of those working, studying, visiting and living in the city centre. Aberdeen in Colour guidance should be considered as well as Government guidance such as “Designing Streets.”</p> <p>Design needs to consider inclusion of digital projection onto the Art Gallery façade/pediment in line with the digital engagement strategy and digital external signage</p>

<b>4.1 Out of Scope</b>
<p>The project will build upon the public realm work of Belmont Street and the refurbishment of Aberdeen Art Gallery. It may help to accelerate the refurbishment and occupation of former Aberdeen University buildings.</p>





# Business Case

## 5. Benefits

### 5.1 Customer Benefits

Benefit	Measures	Source	Baseline	Expected Benefit	Expected Date	Measure Frequency
Key Destination	Increased activity	Footfall counter	TBD	Increased activity leading to increased vitality and vibrancy	From completion	Monthly comparator
	Beverages sold	Retailers	TBD	Increased dwell time	From completion	Monthly comparator
Improved active travel	Increased cycling	On-site counter	TBD	Increased cycling	From completion	Annual

### 5.2 Staff Benefits

Benefit	Measures	Source	Baseline	Expected Benefit	Expected Date	Measure Frequency



# Business Case

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5.3 Resources Benefits (financial)							
Benefit	Measures	Source	Capital or Revenue?	Baseline (£'000)	Saving (£'000)	Expected Date	Measure Frequency



# Business Case

## 6. Costs

### 6.1 Project Capital Expenditure & Income

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources</b>											
Add cost items under each heading											
<b>Land Acquisitions</b>											
<b>New Vehicles, Plant or Equipment</b>											
<b>Construction Costs</b>	£550,000	£2,000,000									
<b>Capital Receipts and Grants</b>		£2,000,000									
<b>Sub-Total</b>	£550,000	£0									

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# Business Case

## 6.2 Project Revenue Expenditure & Income

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources</b>	30,000	30,000									
Add cost items under each heading											
<b>Non Staffing Resources</b>											
<b>Revenue Receipts and Grants</b>	30,000										
<b>Sub-Total</b>	<b>0</b>	<b>30,000</b>									



# Business Case

## 6.3 Post- Project Capital Expenditure & Income

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources</b>											
Add cost items under each heading											
<b>Land Acquisitions</b>											
<b>New Vehicles, Plant or Equipment</b>											
<b>Construction Costs</b>											
<b>Capital Receipts and Grants</b>											
<b>Sub-Total</b>											



# Business Case

## 6.4 Post- Project Revenue Expenditure & Income

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources</b>											
Add cost items under each heading											
<b>Non Staffing Resources</b>		Assumed that ongoing maintenance cost can reflect current requirements in the context of the city centre generally.									
<b>Revenue Receipts and Grants</b>											
<b>Sub-Total</b>											

**7. Procurement Approach**

Contractor to be procured through open tender.

**8. Key Risks**

Description	Mitigation
Traffic regulation processes and procedures	Early engagement with key stakeholders including Robert Gordon's College, Aber

**9. Time**

**9.1 Time Constraints & Aspirations**

Stage 1 completion would be in January 2019. Stages 2 and 3 would follow later into 2019/20 depending on traffic regulation processes.

**9.2 Key Milestones**

Description	Target Date
Design Approved	September 2018
Stage 1 completion	January 2019
Stage 2 completion	Late 2020

**10. Governance**

Role	Name
<b>Project Sponsor</b>	Gale Beattie
<b>Project Manager</b>	Nigel McDowell
<b>Other Project Roles</b>	Programme Manager – Scott Davidson

**11. Resources**

Task	Responsible Service/Team	Start Date	End Date
Road design	Alan McKay		
Roads regulation	Doug Ritchie		
Procurement	Boguslawka Symonowicz		
Urban design	Nigel McDowell		

**12. Environmental Management**

Existing trees to be retained. New tree planting to be investigated.

**13. Stakeholders**

Robert Gordon’s College, Disability Equity Partnership, Aberdeen Inspired, The Academy, Visit Aberdeenshire, Civic Forum and City Centre Community Council. Lord Provost/ veterans/British Legion/serving armed forces all stakeholders for the War Memorial

Internal stakeholders include ACC City Growth, Visit Aberdeenshire,, Aberdeen 365 Events Group and AAG Project Board.

Stakeholder management plan will be prepared.

**14. Assumptions**

Funding support from Community Links programme of £2m may be available.

Assumed that ongoing maintenance cost can reflect current requirements in the context of the city centre generally.



**15. Dependencies**

Review of archaeological discoveries.

**16. Constraints**

Traffic regulation requirements

**17. ICT Hardware, Software or Network infrastructure**

Description of change to Hardware, Software or Network Infrastructure	EA Approval Required?	Date Approval Received
If digital projection; ICT will be required		

**18. Support Services Consulted**

Service	Name	Sections Checked / Contributed	Their Comments	Date
PMO				
Finance	Scott Paterson		There is usually a cost element associated to improved maintenance of urban realm; are you expecting the Belmont St regime to be extended to Schoolhill, and if so, how much "extra" will it cost?	20/4/18
Asset Management	Stephen Booth		Further clarity sought on Option 3 selection.	20/4/18
Estates	Stephen Booth			
Legal	Alison Watson			

(Conveyancing)				
Legal (Procurement)				
Procurement	Boguslaw Symonowicz		You are talking about stage delivery, to ensure the continuity of contractor/consultant it would require tender for all stages with break clauses allowing for any changes circumstances.	17/4/18
	Alison Gallacher		More clarity on options and benefits sought	19/4/18
ICT				
Architecture and Design Team	Nigel McDowell		<p>I think it would be worth making a statement that the condition of the space currently will require considerable investment to bring it up to what should be a tolerable standard/for purpose – and therefore making colleagues aware that lack of investment and attention to detail means that something needs to be done at some point soon, regardless. Scheme will be under maintenance period for 1yr or 18months and shouldn't need much investment for years' thereafter. –</p> <p>The tree roots have made the footways around about uneven, the footways are likely to have compromised the health of the mature elms, the raised area is a barrier to free movement, there is considerable accumulation of unplanned street furniture cluttering the area, the space is not of the calibre to match and to celebrate the Art Gallery investment</p>	24/4/18

			<p>and its destination importance, the planning approval for the hotel in the Former RGU means that the place is ripe for investment and that an improvement to its urban realm would send the right messages to any future use/operator, etc.)</p> <p>All the key features such as the VC memorial, the statue of Gordon of Khartoum and the 4 mature elms will be retained within a scheme design as well as providing a new and accessible plaza for all</p>	
Grounds Maintenance	Steven Shaw		<p>Maintenance ie street sweeping etc is minimal at the moment. If the project is a success then there will be increased use of the space. This being the case then I would advise seeking additional revenue budget to cover maintenance. We want to be able to look after this space properly and keep it looking its best. By continuing with existing resources / budget then this may not be possible and I would not want to increase maintenance to this space to the detriment of other parts of the city centre.</p>	17/4/18
Environmental Policy	Gale Beattie			
Planning	Gale Beattie			
Communications	David Ewen			
HR				
City Growth	Richard Sweetnam		Some minor comments related to internal stakeholders and	18/4/18

	Christine Rew		<p>performance metrics</p> <p>Option 3 addresses public access to Cowdray Hall and Art Gallery; also allows the City to consider future significant outdoor art commission; aligns with the 'Aberdeen in Colour' aspirations for Belmont Street by offering opportunity to extend reach into Schoolhill.</p> <p>Scope - Design needs to include digital projection onto the Art Gallery façade/pediment in line with the digital engagement strategy and inclusion of digital external signage.</p> <p>Expand to include war memorial stakeholders.</p>	18/4/18
Operations	Vycki Ritson		Include revenue cost estimates and recognise potential procedural delay	17/4/18

**19. Document Revision History**

Version	Reason	By	Date

<b>6- EHRIA Summary (See Para.6 of the Guide.)</b>	
<b>Report Title</b>	<p>RES/18/033 – Schoolhill Public Realm ACC Strategic Commissioning Committee 7 June 2018</p> <p>RES/18/029 – Schoolhill Public Realm Enhancement ACC City Growth and Resources Committee 19 June 2018</p>
<b>Assessment Rating</b>	<p><b>RED</b> - <input type="checkbox"/></p> <p><b>RED AMBER</b> - <input type="checkbox"/></p> <p><b>AMBER</b> - <input type="checkbox"/></p> <p><b>GREEN</b> - X</p>
<b>Assessment not required</b>	<p><b>Evidence</b> The purpose of the report is to seek approval for the finances and delivery of streetscape works in Schoolhill and to bring forward proposals for a comprehensive design for the urban realm of Schoolhill for delivery at a future date.</p> <p><b>Equality:</b> There will be no direct impact on equality as the process of engagement by interested parties in developing the proposals should mean all interested parties have been inclusively brought into the project.</p> <p><b>Human Rights:</b> There will be no direct impact on human rights as the process of engagement by interested parties in developing the proposals should mean all interested parties have been inclusively brought into the project.</p>
<b>Assessment completed</b>	<b>As a result of completing this assessment, detail the actions proposed to remove or reduce any risks of adverse outcomes which were identified at Section 7 below.</b>

<p><b>Review of function impact</b></p>	<p><b>Assessing impact does not end with the introduction of new or revised functions. Assessment of impact should be considered as ongoing, to monitor the actual impact of the function.</b></p> <p><b>The following timescales are suggested to review ongoing functions dependent on their respective assessment rating:</b></p> <p><b>RED – 12 months</b></p> <p><b>RED AMBER – 18 months</b></p> <p><b>AMBER – 24 months</b></p> <p><b>GREEN – 36 months</b></p>
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7- Action Planning (See Para. 7 of the Guide.)				
Identified Risk and to whom:	Recommended Actions:	Responsible Lead:	Completion Date:	Review Date:
<p><b>Continued risk assessment</b></p> <p>All aspects of the project will be undertaken by ACC staff with both weekly and monthly progress and update meetings in calendar. This will ensure all risk assessment is measured and actioned in order to efficiently deliver the project.</p>	<p><b>Revisit EHRIA process</b></p> <p>The project will be subject to further EHRIA if approval is given to develop a design for a comprehensive streetscape improvement to Schoolhill.</p>	<p>Chief Officer Resources &amp; Chief Officer Strategic Place Planning in project delivery</p>	<p>The project is staged to complete before the end of the calendar year 2018.</p>	<p>N/A</p>

**8 - Sign off (See Para.8 of the Guide.)**

<b>Completed by (Names and Services) :</b>	Nigel McDowell – Strategic Place Planning
<b>Signed off by (Head of Service) :</b>	Gale Beattie – Strategic Place Planning

Only sections 6, 7 and 8 will be attached to the committee report

The full EHRIA will be published on Aberdeen City Council's website under [http://www.aberdeencity.gov.uk/xeq\\_EHRIA\\_Search.asp](http://www.aberdeencity.gov.uk/xeq_EHRIA_Search.asp)

Please send an electronic format of the full EHRIA without signature to: [SHoward@aberdeencity.gov.uk](mailto:SHoward@aberdeencity.gov.uk)

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## ABERDEEN CITY COUNCIL

<b>COMMITTEE</b>	Strategic Commissioning
<b>DATE</b>	7 June 2018
<b>REPORT TITLE</b>	Joint Initiative for hydrogen Vehicles across Europe (JIVE)
<b>REPORT NUMBER</b>	RES/18/040
<b>DIRECTOR</b>	Steve Whyte
<b>CHIEF OFFICER</b>	Stephen Booth
<b>REPORT AUTHOR</b>	Andrew Win
<b>TERMS OF REFERENCE</b>	Remit of Committee: 3.1, 3.2, 3.4

### 1. PURPOSE OF REPORT

- 1.1 This report provides an update on the Joint Initiative for hydrogen Vehicles across Europe (JIVE) and seeks approval to procure vehicles and hydrogen supply to deliver the project.

### 2. RECOMMENDATION(S)

That the Committee:-

- 2.1 Delegate authority to the Head of Commercial & Procurement Services to enter into a contract to purchase ten hydrogen fuel cell buses from the UK joint Hydrogen Fuel Cell Bus contract framework, subject to the Council entering into a commitment with a bus operator;
- 2.2 Instruct officers to identify the most economically advantageous option to procure a hydrogen supply and delegate authority to the Chief Officer – Capital, following consultation with the Chief Officer – Finance and the Head of Commercial & Procurement Services, to undertake a joint procurement process with Dundee City Council to appoint a supplier of hydrogen.

### 3. BACKGROUND

- 3.1 Details of the European Funded Joint Initiative for hydrogen Vehicles across Europe (JIVE) Project have previously been presented to Finance, Policy & Resources Committee – 1 December 2016, 9 March 2017 and 1 December 2017. Officers were instructed to provide updates on the project. JIVE aims to further develop the hydrogen bus fuel cell technology and apply the learning from projects delivered and/or underway to bring a new generation of hydrogen fuel cell buses that are more reliable, economical and fuel efficient.

### 3.2 Purchase of Buses

3.2.1 Aberdeen is a partner with four other UK Cities - London, Birmingham, Dundee and Brighton - and this consortium has undertaken a joint procurement exercise to procure hydrogen fuel cell buses for the UK. This process was led by Transport for London commercial procurement team. The joint procurement exercise has recently finished and a framework agreement is in place with two bus OEMs (Original Equipment Manufacturer). The framework agreement sets a number of commercial terms for the OEMs to meet and these are as follows:-

#### 3.2.2

Term	Detail/Consideration
Price	Less than £600,000 per bus (as required by the European Funding requirement of less than €650,000 per bus)
Warranties	90% bus availability  Performance warranties on all major components including the bus structure, chassis, fuel cell, drive train, and batteries.
Service Support	Manufacturer responsibility for endemic/epidemic faults  Parts, maintenance and technical support performance obligations

3.2.3 To maximise the benefit of the framework agreement, partners have agreed to order 60 fuel cell buses in one order in the next few months. As a result, officers require approval from committee for Aberdeen City Council to purchase ten hydrogen fuel cell buses through this framework.

### 3.3 Renewable Hydrogen Production & Supply

3.3.1 Offices have prepared a business case for the renewable hydrogen production and supply procurement exercise. The attached business case (Appendix 1) outlines the business needs, financial costs and preferred option to procure commercially viable source of renewable hydrogen to supply Aberdeen and Dundee City Council's hydrogen fuel cell bus and vehicle fleets.

3.3.2 The production and supply of hydrogen from renewable sources enables successful implementation of the additional ten hydrogen fuel cell buses and contributes to the Aberdeen Region Hydrogen Strategy and Action Plan 2015-2025. A recent market sounding exercise has demonstrated interest from suppliers and businesses, both local and international, to produce and supply 1300kg of hydrogen per day to serve hydrogen fleets in Aberdeen and Dundee. The key principle of the supply is that it will be delivered on a commercial basis and this is essential in ensuring the continued development of the hydrogen sector in Scotland.

3.3.3 Scope of the joint procurement exercise with Dundee City Council includes: design, build and operation of a hydrogen production facility; production of 1300kg of green hydrogen to meet both cities' needs; and distribution of the hydrogen at an agreed target price.

#### 4. FINANCIAL IMPLICATIONS

4.1 As detailed at Finance, Policy & Resources Committee on 1 December 2018, this project has budgeted costs of £7.2m. This is comprised of £4.7m from external grants and £2.5m allocated from the General Fund Capital Budget at Council on 23 August 2017.

4.2 The recommended procurement approach would allow the Council to engage with bidders during the tender process. This lends itself to competitive dialogue and negotiated procedure – ensuring viable submissions and innovative solutions can be developed.

#### 5. LEGAL IMPLICATIONS

5.1 The framework agreement and call off contract's terms and conditions can be utilised by the Council for the purchase of the 10 buses and have been reviewed by the Commercial Legal Team.

5.2 Procurement documents and terms and conditions for the hydrogen production and supply procurement will be developed in consultation with C&PS, including the Commercial Legal Team.

#### 6. MANAGEMENT OF RISK

Procurement		Risk	Low (L), Medium (M), High (H)	Mitigation
<b>OEM Bus Purchase Framework &amp; Call Off Agreement</b>	<b>Financial</b>	Additional costs associated with bus operator requirements	L	Early engagement has been had with bus operators and previous requirements have been shared when the tender specification was prepared.
	<b>Legal</b>	Contract call off agreement causes	L	The approval to enter into the call off contract will

		delays		ensure that this is completed in the timescales required.
	<b>Employee</b>	Demand on staff resources for delivering contracts on time	L	Services across council already engaged with process
	<b>Customer</b>	Delays in project may impact bus deployment timescales for bus operators	L	Flexibility has been built into contracts and delivery strategies
	<b>Environment</b>	The system must be safe and compliant with HSE regulations	L	Suppliers will be appropriately checked to ensure safety aspects of delivery are not compromised
	<b>Technology</b>	Failure in maintenance supply chain may result in operation downtime	L	A schedule of components and their supply routes will be compiled to ensure that any maintenance items are easily traceable and accessible
	<b>Reputational</b>	Failure to develop adequate joint contracts may affect working relations with colleagues from external organisations	L	Back-to-back contracts will be developed with partner organisations, such as Transport for London, Birmingham.
<b>Hydrogen Production and Supply</b>	<b>Financial</b>	Failure for market to deliver tender requirement	L	A market sounding exercise has demonstrated that there are many suppliers and interested businesses who could deliver the requirement.
	<b>Legal</b>	Contract finalisation causes delays	L	The contracting process has begun with early stage discussions to mitigate potential delays
	<b>Employee</b>	Demand on staff resources for delivering contracts on time	L	Services across council already engaged with process
	<b>Customer</b>	Delays in project may impact bus deployment timescales for bus operators	L	Flexibility has been built into contracts and delivery strategies
	<b>Environment</b>	The system must be safe and compliant with HSE regulations	L	Suppliers will be appropriately checked to ensure safety aspects of delivery are not compromised

	<b>Technology</b>	Failure in maintenance supply chain may result in operation downtime	L	A schedule of components and their supply routes will be compiled to ensure that any maintenance items are easily traceable and accessible
	<b>Reputational</b>	Failure to develop adequate joint contracts may affect working relations with colleagues from external organisations	L	Back-to-back contracts will be developed with partner organisations, such as Dundee City Council.

## 7. OUTCOMES

<b>Local Outcome Improvement Plan Themes</b>	
	<b>Impact of Report</b>
<b>Prosperous Economy</b>	Delivers on LOIP primary drivers of: Investment in infrastructure; innovation; inclusive economic growth; and internationalisation.

## 8. IMPACT ASSESSMENTS

<b>Assessment</b>	<b>Outcome</b>
<b>Equality &amp; Human Rights Impact Assessment</b>	Full EHRIA not required
<b>Privacy Impact Assessment</b>	Not required
<b><a href="#">Children's Rights Impact Assessment/Duty of Due Regard</a></b>	Not applicable

## 9. BACKGROUND PAPERS

Aberdeen City Council:

CHI/16/258 – FCHJU JIVE Business Case

CHI/17/050 – JIVE Project: Grant Agreement

CHI/17/260 - FCHJU Fuel Cell Bus Commercialisation Project

Aberdeen City & Region Hydrogen Strategy and Action Plan 2015-2025

## 10. APPENDICES

Business Case – JIVE: Renewable H2 Production and Supply

## 11. REPORT AUTHOR CONTACT DETAILS

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Chief Officer – Corporate Landlord

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01224 522675

	<p>Corporate Project Management Toolkit</p> <h1>Business Case</h1>	<p>Project Stage</p> <h2>Define</h2>
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<b>Project Name</b>	JIVE - Renewable H2 Production and Supply	<b>Date</b>	14.05.18
<b>Author</b>	Claire Stevenson	<b>Version</b>	1.0

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**1. Business Need**

Aberdeen City has Europe’s largest fleet of fuel cell buses, along with the UK’s largest hydrogen production and bus refuelling station. It has developed an international reputation as a ‘centre of excellence’ for hydrogen and fuel cell technologies.

The Aberdeen Hydrogen Bus Project has been operating for 3 years, and the buses have collectively travelled 857,208 miles, carrying 1,539,607 passengers on two cross-city routes. The refuelling station at Kittybrewster continues to offer 99.9% availability.

The European Funded Joint Initiative for hydrogen Vehicles across Europe (JIVE) project aims to develop further the hydrogen bus fuel cell technology and apply the learning from projects delivered and/or underway and bring a new generation of hydrogen fuel cell buses that are more reliable, economical and fuel efficient.

The project will introduce a fleet of 10 new buses that will complement Aberdeen’s existing bus fleet. The intention is that the new fleet will extend the uses of these buses and their associated infrastructure past the Aberdeen Hydrogen Project’s initial timescales; assisting the bus operators in the city to test the technology over the life of a diesel equivalent bus operational life.

Aberdeen’s participation in the JIVE project helps support the eventual commercialisation of hydrogen and fuel cell technology in buses. This is an important step as being part of a larger bus deployment will reduce capital costs and further develop the manufacturing supply chain. A joint investigation into the production and supply of hydrogen in partnership with Dundee City Council, a partner within the JIVE project, also affords the opportunity to develop the supply chain and promote diversification within the energy sector.

For successful implementation of the additional 10 buses and to further contribute to the Aberdeen Region Hydrogen Strategy and Action Plan 2015-2025, there is a need for the production and supply of hydrogen. A recent market sounding exercise has demonstrated interest from suppliers and businesses, both local and international to produce and supply 1300Kg of hydrogen per day to serve the Aberdeen and Dundee hydrogen fleets. The key principle of the supply is that it will be delivered on a commercial basis and this is essential in ensuring the continued development of the hydrogen sector in Scotland

The City Region’s Hydrogen Strategy has considered the public sector’s role in the hydrogen sector. It notes that until the total cost of ownership of hydrogen buses is equivalent to a conventional bus, and there is sustained investment in the sector by bus manufacturers, the public sector will continue to have a role to facilitate the growth of this sector and develop policies to enable the private sector to adopt hydrogen technologies.

**2. Objectives**

1. Promote hydrogen vehicle deployments by a range of stakeholders in the region
2. Expand production and distribution of renewable hydrogen
3. Develop hydrogen refuelling infrastructure
4. Explore the roll-out of other tried and tested or innovative hydrogen uses
5. Encourage the development of the hydrogen economy's supply chain, seeking opportunities for the region's existing energy expertise to diversify and benefit from this growing industry
6. Promote a greater understanding and acceptance of hydrogen technologies through communication and education activities
7. Ensure strategy and policy development at all levels of government are supportive of hydrogen technologies

**3. Options Appraisal**

**3.1 Option 1 – Do Minimum**

<b>Description</b>	Use the existing infrastructure planned for the operation of the JIVE project
<b>Expected Costs</b>	£1.7 million Capex for expansion of hydrogen fuelling facilities
<b>Risks Specific to this Option</b>	There would be difficulty in securing a commercial cost of hydrogen production and potential issues surrounding the electricity from the grid coming from a traceable renewable source. With the additional 10 buses, this would put pressure on the sites at Langdykes Road and Kittybrewster.
<b>Advantages &amp; Disadvantages</b>	<p>Advantage – Existing infrastructure in place so timescales can be met.</p> <p>Disadvantages – Securing hydrogen fuel price, project viability, failure to fully meet the hydrogen strategy objectives.</p>
<b>Other Points</b>	

**3.2 Option 2 – Enter into production and supply of H2 contract**

<b>Description</b>	Enter into a supply contract with public sector partners based on a H2 price and manage the contractual requirements and interface between hydrogen vehicle uses and the refuelling
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**Business Case**

	infrastructure
<b>Expected Costs</b>	£1.7 million capital investment in hydrogen refuelling infrastructure
<b>Risks Specific to this Option</b>	The supply of hydrogen outweighs the requirements; timescales are not met.
<b>Advantages &amp; Disadvantages</b>	<p>Advantage – Supports and advances Government legislation and the long term outcomes of the Aberdeen Regions Hydrogen Strategy and Action Plan 2015-2025.</p> <p>Disadvantage – capacity created exceeds immediate demand; there may be a lack of uptake of hydrogen or a delay in the increase of a hydrogen fleet of vehicles.</p>
<b>Other Points</b>	UK Government legislation and commitment to hydrogen as an alternative fuel should mitigate the above risks. A recent market sounding exercise demonstrates the enthusiasm from suppliers and businesses to meet the above objectives.

**3.3 Scoring of Options Against Objectives**

Use the table below to score options against the objectives in order to create a shortlist of options to be considered.

Objectives	Options Scoring Against Objectives							
	1	2						
1. Promote hydrogen vehicle deployments	1	2						
2. Expand production and distribution of renewable H2	1	3						
3. Develop hydrogen refuelling infrastructure	2	3						
4. Explore other hydrogen uses	1	2						
5. Encourage hydrogen supply chain development	2	3						
6. Promote understanding and acceptance of H2 technology	2	2						
7. Ensure government support of H2 technology	2	2						
<b>Total</b>	11	17						
<b>Ranking</b>	2	1						

**Scoring**


Fully Delivers = 3

Mostly Delivers = 2

Delivers to a Limited Extent = 1

Does not Deliver = 0


Will have a negative impact on objective = -1

 <p><b>ABERDEEN</b> CITY COUNCIL</p>	<p>Corporate Project Management Toolkit</p> <p><b>Business Case</b></p>	<p>Project Stage</p> <p><b>Define</b></p>
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<b>3.4 Recommendation</b>
<p>The recommended course of action would be to enter into a commercial supply agreement for the production and supply of hydrogen in conjunction with partner councils.</p>

<b>4. Scope</b>
<p>Aberdeen City Council and Dundee City Council will procure the production and supply of renewable hydrogen to Aberdeen City and Dundee City by the end of 2019. The preferred supplier(s) will need to deliver the following elements:</p> <ul style="list-style-type: none"> <li>- Design, build and operate a hydrogen production facility to meet Aberdeen and Dundee City Councils daily requirements</li> <li>- Produce hydrogen through the use of energy traceable to a renewable energy source to supply 1300Kg of hydrogen 365 days per annum for a minimum of 10 years on the basis of the initial demands: <ul style="list-style-type: none"> <li>- 900Kg for Aberdeen</li> <li>- 400Kg for Dundee</li> </ul> </li> <li>- Distribute the hydrogen fuel to fuelling stations in Aberdeen and Dundee City centres at a target price of between £3.50 and £5.00 per Kg for a delivered cost at the dispenser.</li> </ul> <p>This project and the supply of the services would be entirely on a commercial basis; Aberdeen City Council would be facilitating the development of this service whilst the supplier(s) would be responsible for building, maintaining and operating the production facilities.</p> <p>The Council may contribute capital funding to redevelop existing refuelling stations or develop a new facility in the City however this is dependent on the solution provided by bidders during the proposed procurement process..</p> <p>At present, this would only supply Aberdeen City and Dundee City fuel requirements but would anticipate that there would be opportunity to supply to other Cities and their Regions throughout Scotland. This also has a positive effect on improving the environment, developing the supply chain and diversifying within the oil and gas sector.</p>

<b>4.1 Out of Scope</b>
<p>Projects to create increased demand and generate financial support to increase low carbon vehicles in the city will run parallel to this project. These include partnership building with the private sector, such as taxi fleets and the airport, to increase vehicles numbers by accessing OLEV (Office for Low Emission Vehicles) funding. Further projects to support city fleets, including refuse trucks are also being developed. Whilst out of scope of this project, their success and implementation will improve financial sustainability of this project, and the</p>

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commercial model of the Langdykes Road fuelling station.

**5. Benefits**

**5.1 Customer Benefits**

Benefit	Measures	Source	Baseline	Expected Benefit	Expected Date	Measure Frequency
Encourages more Original Equipment Manufacturers (OEMs) to the area and encourages more affordable purchasing options for fuel	Comparable price with diesel	AHBP	£8 per Kg H2	£3-£5 per Kg H2	Dec 19	Annual
Lower Greenhouse Gas Emissions (GHG) promoting a healthier city	GHG emission measurements	AHBP	460 tonnes CO2e	Increase on baseline	Dec 19	Annual
Public acceptance of zero emission transport technologies	Public satisfaction surveys	AHBP	Original survey from 2015 AHBP	Increase in public satisfaction	Dec 19	Annual
Competitive dialogue encourages innovation and competition between suppliers and increases number of companies getting involved in hydrogen production	Market Testing Exercise	ACC	16 companies	Increase on 16	Dec 19	Annual
Increase in uptake of low carbon vehicles (LCV) for private use	Increase in number of vehicles purchased for private use	Government (registered vehicles)	689 LCV in Aberdeen(shire)	Increase from baseline	Dec 19	Annual

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### 5.2 Staff Benefits

Benefit	Measures	Source	Baseline	Expected Benefit	Expected Date	Measure Frequency
Personal development opportunities to engage with the hydrogen and renewables sector and increase learning opportunities	Employment of 1 FTE at salary G14	ACC	4	1 FTE	Dec 18	Annual

### 5.3 Resources Benefits (financial)

Benefit	Measures	Source	Capital or Revenue?	Baseline (£'000)	Saving (£'000)	Expected Date	Measure Frequency
Joint procurement with Dundee City Council for the supply and production of H2 from a renewable source will reduce costs compared with single city procurement	Project remains within budget Reduced cost of hydrogen	ACC	Revenue	£424,240 per annum (£8 per Kg H2 for 10 buses)	£159,090 per annum (for 10 buses)	Sept 2019	Annual

## 6. Costs

Related to JIVE Business Case which was agreed at Capital Board in December 2017 – following costs relate to hydrogen supply only.

### 6.1 Project Capital Expenditure & Income

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources</b>	0										



**Business Case**

<b>Land Acquisitions</b>	0											
<b>New Vehicles, Plant or Equipment</b>												
10 H2 buses	5,500											
<b>Construction Costs</b>												
HRS Capex	1,700											
<b>Capital Receipts and Grants</b>												
Scottish Government	(3,000)											
EU Funding	(1,700)											
<b>Sub-Total</b>	<b>£2,500</b>											

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<b>6.2 Project Revenue Expenditure &amp; Income</b>											
(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources (same position as shown on capital table)</b>											
Staff Project Management costs	61	62	63								
<b>Non Staffing Resources</b>											
Commercial/Legal Support	22										
Maintainance (including 2.5%	180	185	190								

## Business Case

annual RPI)											
Hydrogen Fuel Costs (including 2.5% annual RPI)	266	272	279								
Operational Costs (including 2.5% annual RPI)	14	14	15								
<b>Revenue Receipts and Grants</b>											
EU funding contribution towards staff costs	(61)	(62)	(63)								
Hydrogen Fuel (Bus operators)	(266)	(272)	(279)								
<b>EU funding contributions towards maintenance and operation costs</b>	(194)	(199)	(205)								
<b>Sub-Total</b>	<b>22</b>	<b>0</b>	<b>0</b>								

### 6.3 Post- Project Capital Expenditure & Income

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources</b>	0										
Add cost items under each heading											
<b>Land Acquisitions</b>	0										
<b>New Vehicles, Plant or Equipment</b>	0										



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<b>Construction Costs</b>	0										
<b>Capital Receipts and Grants</b>	0										
<b>Sub-Total</b>	<b>£0</b>										


6.4 Post- Project Revenue Expenditure & Income											
(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources</b>	0										
<b>Non Staffing Resources</b>											
Maintenance (including 2.5% annual RPI)	200	203	205	207	209	211	213				
H2 Fuel Costs	286	293	300	308	316	324	332				
<b>Revenue Receipts and Grants</b>											
Operator Maintenance	(200)	(203)	(205)	(207)	(209)	(211)	(213)				

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Recoveries											
H2 Fuel (Bus operators)	(286)	(293)	(300)	(308)	(316)	(324)	(332)				
<b>Sub-Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>				

	<p>Corporate Project Management Toolkit</p> <h1>Business Case</h1>	<p>Project Stage</p> <h2>Define</h2>
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**7. Procurement Approach – Commercial contract**


Given the interfaces between the different suppliers as well as the maturity in the UK market for hydrogen production and supply, the procurement approach lends itself to a competitive dialogue/negotiated procedure.

The advantage of this procedure is that it allows the Council to speak to bidders during the tender process, so it can ensure that viable submissions and innovation solutions can be developed. It should be noted that more time and required resources to attend the negotiation meetings.

<b>8. Key Risks</b>	
<b>Description</b>	<b>Mitigation</b>
Commercial – contract finalisation causes delays	Contracting process has begun with early stage discussions to help mitigate any potential delays
Commercial – contracts – relationships with other partners/Scottish cities	Ensure back to back contracts
Operational – Timescales slip during the project implementation phase	Flexibility built into contracts and delivery strategies
Legal – planning application delays	If site is required for H2 infrastructure – utilise land already used for H2 production
Environmental – ensuring a safe system	Suppliers will be appropriately checked to ensure safety aspects of delivery are not compromised.
Technical/Operational – Maintenance	Compile a schedule of components and their supply routes to ensure that any maintenance items are easily traceable and accessible.
Communications – Public engagement	Public consultations with local residents with regular updates concerning build disruption/ safety concerns

**9. Time**

**9.1 Time Constraints & Aspirations**

	Corporate Project Management Toolkit  <b>Business Case</b>	Project Stage  <b>Define</b>
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Committee Approval (Strategic Commissioning Committee)	September 2018	
Contract Award Decision	December 2018	

9.2 Key Milestones	
Description	Target Date
Committee Approval	June 2018
Contract Award Decision	December 2018
Site Construction	Early 2019
Commissioning	Autumn 2019
Supply Commencement	Winter 2019

10. Governance	
The JIVE project will be managed through the Council's existing Capital programmes governance with the project reported through the energy programme board.	
Role	Name
Project Sponsor	Richard Sweetnam
Project Manager	Andrew Win/ Claire Stevenson
Other Project Roles	

11. Resources			
Task	Responsible Service/Team	Start Date	End Date
Development of the procurement documents	Commissioning - CPS		
Legal terms and conditions	Commissioning - CPS		
EU funding	City Growth - Partnerships		
Asset Management	Corporate Governance – Asset Management		

### 12. Environmental Management

The project will have a positive environmental impact. Hydrogen fuel cell vehicles significantly reduce air and noise pollution which has a positive impact on public health. The electricity and hydrogen are produced from renewable energy and the deployment of hydrogen fuel celled vehicles will have a significant benefit to local air quality.

### 13. Stakeholders

First Group/Stagecoach – the development of a hydrogen supply will support the deployment of future low carbon vehicles, which will contribute toward the financial viability of the hydrogen supply.

Private & Public Companies – Inclusion of low carbon vehicles in fleets will create demand on site and ensure financial viability of the hydrogen supply.

Other Local Authorities: Fiona Goodenough (SCA), Iain Leith (Dundee City Council), Barbara Whiting (Fife), Michael Figures (Perth & Kinross)

### 14. Assumptions

The market sounding exercise demonstrated that there are many suppliers and interested business who could deliver the requirement. However, the response indicates that the preferred response will be consortium bids involving a renewable energy supplier or more, an electrolyser/hydrogen manufacturer/supplier and a gas supplier/ transport operative.

Given the interfaces between the different suppliers as well as the maturity in the UK market for hydrogen production and supply, there is an assumption that the market can deliver against this requirement.

### 15. Dependencies

Many project dependencies have been identified and these need to be considered as part of the procurement decision and timescales.

- Bus deployment timescales (end of 2019)
- Bus operator agreement/ lease agreement
- Commercial risks identified in the market sounding responses
- Refuelling infrastructure sites and land
- Dundee/Perth & Kinross/Fife financial and contractual commitment
- Technical and legal support

**16. Constraints – Hydrogen Supply**

The maturity of the market could be a potential constraint however the market sounding exercise shows that hydrogen production and supply sector is available and some form of public sector intervention will be required.

**17. ICT Hardware, Software or Network infrastructure**

Description of change to Hardware, Software or Network Infrastructure	EA Approval Required?	Date Approval Received
None		

**18. Support Services Consulted**

Service	Name	Sections Checked / Contributed	Their Comments	Date
PMO				
Finance				
Asset Management				
Estates				
Legal (Conveyancing)				
Legal (Procurement)				
Procurement				
ICT				
Architecture and Design Team				
Grounds Maintenance				
Environmental Policy				
Planning				
Communications				
HR				





## Business Case

### 19. Document Revision History

Version	Reason	By	Date

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## ABERDEEN CITY COUNCIL

<b>COMMITTEE</b>	Strategic Commissioning
<b>DATE</b>	7 June 2018
<b>REPORT TITLE</b>	Demolition of Torry Academy and Kincorth Academy
<b>REPORT NUMBER</b>	RES/18/025
<b>DIRECTOR</b>	Steven Whyte
<b>CHIEF OFFICER</b>	Stephen Booth
<b>REPORT AUTHOR</b>	Alastair Reid
<b>TERMS OF REFERENCE</b>	3.4 to approve procurement strategies to meet agreed outcomes to enable officers to purchase and contract services and to decommission services that do not meet the needs of the population group.

### 1. PURPOSE OF REPORT

To highlight the business need for the demolition of Torry Academy and Kincorth Academy. In addition to seek approval of the associated business cases, the recommended procurement route and use of the identified budgets.

### 2. RECOMMENDATION(S)

That the Capital Programme Committee:-

- 2.1 Approve the business case for the demolition of Torry Academy and Kincorth Academy.
- 2.2 Approve the use of the Condition & Suitability Programme budget to fund the Kincorth Academy Demolition.
- 2.3 Approve the use of the capital budget for the new Torry Primary School and Community Hub to fund the Torry Academy Demolition.

That the Strategic Commissioning Committee:-

- 2.4 Approve the procurement business case including the estimated expenditure as outlined and instruct the Chief Officer – Corporate Landlord in consultation with the Head of Commercial and Procurement Services to enter into a competitive tendering process for the demolitions in accordance with the Council's Procurement Regulations.

### 3. BACKGROUND

- 3.1 Torry Academy and Kincorth Academy will close at the end of the 2017/18 school year. It is anticipated that the buildings will be completely empty by the end of July.
- 3.2 There are no alternative operational requirements for the buildings. The Torry Academy site has been identified as the preferred site for the new Torry Primary School and Community Hub. In addition, Kincorth Academy has been identified as a site to be developed for housing by the Council. As such all buildings will need to be demolished to facilitate the progression of these projects. The lodge adjacent to Torry Academy has been vacant since July 2015 and will also require to be demolished.
- 3.3 Although these schools will no longer be operational there are still costs of holding these properties. The single biggest cost is business rates which is still payable even though the buildings are vacant. There will also be costs for keeping the premises safe and secure, along with some continued grounds maintenance requirements. If the buildings are likely to remain in place for some time after July then they will be boarded up in line with our insurers requirements. The cost of this is significant.
- 3.4 Vacant buildings are also targets for theft, vandalism and arson. This can have direct costs in terms of remedial work with staff time being considerable to manage such issues. There are risks of injury to anyone entering the building both legally and illegally, particularly as the buildings deteriorate. Large disused buildings are unsightly and likely to lead to complaints from the associated communities.
- 3.5 For consideration by the Capital Programme Committee is **Appendix A**, which outlines the business case for the demolitions. This supports recommendations 2.1, 2.2 and 2.3. The objectives set out in the business case are:-
- Clear sites for future development
  - Minimise period that buildings are empty
  - Minimise revenue costs
- 3.6 The key points to consider from the business case are:-
- The buildings will have to be demolished to enable future development.
  - Business rates costs apply even when the buildings are vacant.
  - Security costs are significant but can be minimised by early demolition.
  - There are significant risks of holding vacant buildings.
  - Only a cleared site removes the majority of the holding costs and the risks associated with vacant buildings.
- 3.7 From the options appraisal it is recommended that demolition be progressed at the earliest opportunity, rather than looking to include the demolition within the new build contracts for the respective sites.

- 3.8 Should the report recommendations be approved the initial programme indicates that the demolition work could commence in February 2019, at the earliest. This would mean the buildings being vacant for around three months. Security arrangements will have to be put in place during that period, which satisfy the requirements of the Council's insurance provider.
- 3.9 The business case was approved by the Asset Programme Board on 9 May 2018 and will be considered by the Capital Programme Board on 16 May. Readers of the report can assume that the Capital Programme Board also approved the business case if this report is included in the final committee papers.
- 3.10 For consideration by the Strategic Commissioning Committee is **Appendix B**, which outlines the procurement business case and supports recommendation 2.4.
- 3.11 Confidential versions of the appendices are included within today's confidential reports, which include the estimated costs for the demolitions and security.

#### **4. FINANCIAL IMPLICATIONS**

- 4.1 There are currently no specific budgets in place for the demolition. It is recommended that the capital budgets identified below are used to fund the work.
- 4.2 The Condition & Suitability Programme has five years of funding totalling £41.593m within the capital programme. A three year programme identifying specific projects is in place which accounts for the financial years 2017/18, 2018/19 and 2019/20. It will be updated in September to cover 2018/19, 2019/20 and 2020/21. The demolition of Kincorth can be funded from the unallocated budget and incorporated into the three year programme in due course. The estimated cost for Kincorth is shown in the confidential version of the business case.
- 4.3 There is £20m allocated in the Capital programme for the new Torry Primary and Community Hub project. Approval of the recommendations would see the budget reduced by the cost of the demolition. The estimated cost for Torry is shown in the confidential version of the business case.
- 4.4 As a minimum, security fencing will have to be installed. If boarding up the buildings is required there would be a further revenue cost. If boarding up is not required then on site security would be necessary until the buildings are handed over to a contractor. Estimated costs for security are shown in the confidential version of Appendix A.
- 4.5 There is a business rates reduction for vacant buildings of 50% for first 3 months and 10% thereafter. The projected costs based on the period the buildings remain vacant are as follows:-

Timeline	Years/Months	Projected Cost
Aug 2018 – Oct 2018	3 months	£36,000
Aug 2018 – Mar 2019	8 months	£144,000
Aug 2018 – Mar 2020	1 year and 8 months	£409,000
Aug 2018 – Mar 2021	2 years and 8 months	£679,000
Aug 2018 – Mar 2022	3 years and 8 months	£955,000
Aug 2018 – Mar 2023	4 years and 8 months	£1,236,000

4.6 Use of a capital budget for the demolition of Kincorth will be subject to the site value being enhanced. This is demonstrated by the completion of a valuation which provides an estimate of the value of the site with buildings in place and then an estimate of the value post demolition. The demolition costs should be offset or exceeded by the increase in value. At the time of writing the valuation had not been finalised but is anticipated that it will support the use of capital. Should this not be confirmed this Committee will be advised.

## 5. LEGAL IMPLICATIONS

5.1 Demolition contracts will be tendered in accordance with the ACC Procurement Regulations and the relevant legislation.

## 6. MANAGEMENT OF RISK

	Risk	Low (L), Medium (M), High (H)	Mitigation
<b>Financial</b>	<p>Prolonged vacant period would have significant cost and there would be the unknown risk of ongoing repairs (e.g. re-securing building).</p> <p>Construction inflation would see the cost of demolition increase if a decision was made to defer the demolition.</p>	<p>H</p> <p>H</p>	<p>Put in appropriate security arrangements and inspection schedules in consultation with insurance provider.</p> <p>Carry out demolition at the earliest opportunity, as per recommended in the business case.</p>
<b>Legal</b>	None identified.		
<b>Employee</b>	Risk of injury to staff when visiting vacant buildings.	L	Follow established procedures for visiting vacant buildings.
<b>Customer</b>	Risk of injury to members	M	Put in appropriate security

	of public through unauthorised access to vacant buildings.		arrangements and inspection schedules in consultation with insurance provider.
<b>Environment</b>	Demolition is not carried out in an environmentally responsible way.	L	Tenders include appropriate conditions and quality questionnaire included as part of process. Progress checks carried out.
<b>Technology</b>	None identified.		
<b>Reputational</b>	Potential complaints from local communities if buildings remain in place for a prolonged period. Fire breaks out in vacant building.  Cleared sites remain vacant for long period.	H  M  L	Carry out demolition at the earliest opportunity, as per recommended in the business case. Put in appropriate security arrangements and inspection schedules in consultation with insurance provider. New developments to be progressed as per current programmes.

## 7. OUTCOMES

<b>Local Outcome Improvement Plan Themes</b>	
	<b>Impact of Report</b>
<b>Prosperous Economy</b>	The demolition of the buildings is a key step in delivering significant capital investment in infrastructure.
<b>Prosperous Place</b>	The demolition of the buildings is a key step in delivering a new school and community hub in Torry. In addition, it paves the way for a significant residential development in Kincorth.

<b>Design Principles of Target Operating Model</b>	
	<b>Impact of Report</b>
<b>Partnerships and Alliances</b>	The demolition of Torry is a step towards the creation of the Torry Community Hub, which will be used by the Council and a variety of parties.

## 8. IMPACT ASSESSMENTS

<b>Assessment</b>	<b>Outcome</b>
-------------------	----------------

<b>Equality &amp; Human Rights Impact Assessment</b>	n/a
<b>Privacy Impact Assessment</b>	n/a
<b>Duty of Due Regard / Fairer Scotland Duty</b>	n/a n/a

## **9. BACKGROUND PAPERS**

Condition & Suitability three year programme report to Finance Policy & Resources Committee 20 September 2017 (item 10.4)

## **10. APPENDICES**

Appendix A – Demolition of Torry Academy and Kincorth Academy business case.

Appendix B - Demolition of Torry Academy and Kincorth Academy procurement business case.

## **11. REPORT AUTHOR CONTACT DETAILS**

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 Team Leader – Asset Management  
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## Appendix A

<b>Project Name</b>	Demolition of Vacant Buildings - Kincorth Academy and Torry Academy	<b>Date</b>	10/5/18
<b>Author</b>	Alastair Reid	<b>Version</b>	2

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# Business Case

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**1. Business Need**

Both Torry Academy and Kincorth Academy will close at the end of the 2017/18 school year. Following this there will be a short period where the remaining furniture, equipment, materials, etc will be removed. It is anticipated that the buildings will be completely empty by the end of July.

There are no alternative operational requirements for the buildings. Torry Academy has been identified as the preferred site for the new Torry Primary School and Community Hub. Kincorth Academy has been identified as a site to be developed for housing by the Council. As such all buildings will need to be demolished to facilitate the progression of these projects. The lodge adjacent to Torry Academy has been vacant since July 2015 and will also require to be demolished.

There is no provision for the demolition of the buildings within the Lochside Academy budget. In addition the transfer of Kincorth Academy site for housing is currently based on a cleared site being provided, so no budget provision for demolition has been made there either.

Although these schools will no longer be operational there are still costs of holding these properties. The single biggest cost is business rates which is still payable even though the buildings are vacant. There will also be costs for keeping the premises safe and secure, along with some continued grounds maintenance costs. If the buildings are likely to remain in place for some time after July then they will be boarded up in line with our insurers requirements. The cost of this is significant.

Vacant buildings are also targets for theft, vandalism and arson. This can have direct costs in terms of remedial work with staff time being considerable to manage such issues. There are risks of injury to anyone entering the building both legally and illegally. Particularly as the buildings deteriorate.

Large disused buildings are unsightly and likely lead to complaints from the associated communities. A cleared site removes the majority of the holding costs and the risks associated with vacant buildings.

Although the work on the new builds will not commence immediately after demolition, there is a clear need to progress with the early demolition of both buildings. If the demolitions can be progressed in good time it may be possible to reduce the security costs.

**2. Objectives**

Clear sites for future development

Minimise period that buildings are empty

Minimise revenue costs

**3. Options Appraisal**

**3.1 Option 1a Torry Academy – Do Nothing/Do minimum**

<b>Description</b>	Secure building but do not progress demolition.
<b>Expected Costs</b>	<p><u>One off costs</u></p> <p>Board up building - £X</p> <p>Install security fencing - £X</p> <p>On site security - £0</p> <p>Demolition - £0</p> <p><u>Ongoing Costs</u></p> <p>Ongoing staff management time – Not possible to estimate</p> <p>Remedial works – Not possible to estimate</p> <p>Business Rates - £530k over 5 years</p> <p>Utilities Standing Charges - TBC</p> <p><u>Future Demolition</u></p> <p>Demolition - £X plus 3% per year for construction inflation</p>
<b>Risks Specific to this Option</b>	Theft, arson and vandalism remains a high risk. Fly tipping, pests (e.g. vermin) and invasive plants would also be significant risks.
<b>Advantages &amp; Disadvantages</b>	<p><u>Advantages</u></p> <p>No immediate demolition requirement.</p> <p>No on site security costs.</p> <p><u>Disadvantages</u></p> <p>Site not made available for new Torry Primary and Community hub.</p> <p>Ongoing revenue costs would surpass the cost of demolition in approximately 5-6 years.</p> <p>Unightly building in middle of community.</p> <p>Risks of vacant building remain.</p> <p>Demolition would still be required eventually.</p>
<b>Other Points</b>	It is more economical to purchase fencing rather than lease, so it is a one off cost rather than ongoing.

**3.2 Option 2a Torry Academy – Progress Demolition**


<b>Description</b>	Progress demolition with funding coming from £20m budget for new Torry Primary/Hub.
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## Business Case

<b>Expected Costs</b>	<p><u>One off costs</u></p> <p>Board up building - £0</p> <p>Install security fencing - £X</p> <p>On site security - £X for 6 months</p> <p>Demolition - £X</p> <p><u>Ongoing Costs</u></p> <p>Ongoing staff management time – £ Not possible to estimate</p> <p>Remedial works – £ Not possible to estimate</p> <p>Business Rates - £45,000 for 6 months</p>
<b>Risks Specific to this Option</b>	There are still risks of theft, arson and vandalism, albeit on a reduced basis.
<b>Advantages &amp; Disadvantages</b>	<p><u>Advantages</u></p> <p>Site made available for future development of new Torry Primary and Community hub.</p> <p>Holding costs removed.</p> <p>No requirement to board up building.</p> <p><u>Disadvantages</u></p> <p>Cost of demolition.</p>
<b>Other Points</b>	<p>It is more economical to purchase fencing rather than lease, so it is a one off cost rather than ongoing.</p> <p>Cost of boarding up could be £0 if Insurance Provider accepts alternative security measures.</p>


### 3.3 Option 3a Torry Academy – Demolition as part of new school/hub contract

<b>Description</b>	Include demolition as part of new School/hub contract.
<b>Expected Costs</b>	<p><u>One off costs</u></p> <p>Board up building - £X</p> <p>Install security fencing - £X</p> <p>On site security - £0</p> <p>Demolition - £0</p> <p><u>Ongoing Costs</u></p> <p>Ongoing staff management time – Not possible to estimate</p> <p>Remedial works – Not possible to estimate</p> <p>Business Rates - £103,000 for 12 months</p>

 <p><b>ABERDEEN</b> CITY COUNCIL</p>	<p>Corporate Project Management Toolkit</p> <h2 style="margin: 0;">Business Case</h2>	<p>Project Stage</p> <h2 style="margin: 0;">Define</h2>
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	<p><u>Future Demolition as part of contract</u> Demolition - £X plus 3% per year for construction inflation</p>
<p><b>Risks Specific to this Option</b></p>	<p>Theft, arson and vandalism remains a high risk.</p>
<p><b>Advantages &amp; Disadvantages</b></p>	<p><u>Advantages</u> Delay in demolition costs. Site made available for future development of new Torry Primary and Community hub. Holding costs removed but at a later date. No on site security costs.</p> <p><u>Disadvantages</u> Extended period of holding costs. Unsightly building in middle of community for longer. Cost of boarding up building. Extended period of managing vacant building. Cost of demolition may increase.</p>
<p><b>Other Points</b></p>	<p>Demolition costs would still be applicable but would be included within the new build contract. 12 months vacant period assumed. It is more economical to purchase fencing rather than lease, so it is a one off cost rather than ongoing.</p>

<p><b>3.4 Option 1b Kincorth Academy – Do Nothing/Do minimum</b></p>		
<p><b>Description</b></p>	<p>Secure building but do not progress demolition.</p>	
<p><b>Expected Costs</b></p>	<p><u>One off costs</u> Board up building - £X Install security fencing - £X On site security - £0 Demolition - £0 Utilities Standing Charges - TBC</p> <p><u>Ongoing Costs</u> Ongoing staff management time – Not possible to estimate Remedial works – Not possible to estimate</p>	
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	<p>Business Rates - £662,000 for 5 years.</p> <p><u>Future Demolition</u></p> <p>Demolition - £X plus 3% per year for construction inflation</p>
<p><b>Risks Specific to this Option</b></p>	<p>Theft, arson and vandalism remains a high risk. Fly tipping, pests (e.g. vermin) and invasive plants would also be significant risks.</p>
<p><b>Advantages &amp; Disadvantages</b></p>	<p><u>Advantages</u></p> <p>No demolition costs.</p> <p><u>Disadvantages</u></p> <p>Site not made available for housing development.</p> <p>Revenue costs would surpass the cost of demolition in approximately 5-6 years.</p> <p>Unightly building in middle of community.</p> <p>Risks of vacant building remain.</p> <p>Demolition would still be required eventually.</p>
<p><b>Other Points</b></p>	<p>It is more economical to purchase fencing rather than lease, so it is a one off cost rather than ongoing.</p>

<p><b>3.5 Option 2b Kincorth Academy – Progress Demolition</b></p>	
<p><b>Description</b></p>	<p>Progress demolition with funding coming from the Condition &amp; Suitability Programme.</p>
<p><b>Expected Costs</b></p>	<p><u>One off costs</u></p> <p>Board up building - £0</p> <p>Install security fencing - £X</p> <p>On site security - £X for 6 months</p> <p>Demolition - £700,000</p> <p><u>Ongoing Costs</u></p> <p>Ongoing staff management time – £0</p> <p>Remedial works – £0</p> <p>Business Rates - £56,000 for 6 months</p>
<p><b>Risks Specific to this Option</b></p>	<p>There are still risks of theft, arson and vandalism, albeit on a reduced basis.</p>

	<p>Corporate Project Management Toolkit</p> <h2>Business Case</h2>	<p>Project Stage</p> <h2>Define</h2>
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<p><b>Advantages &amp; Disadvantages</b></p>	<p><u>Advantages</u>  Site made available for future housing development.  Holding costs removed.  Less security costs.</p> <p><u>Disadvantages</u>  Cost of demolition.</p>
<p><b>Other Points</b></p>	<p>It is more economical to purchase fencing rather than lease, so it is a one off cost rather than ongoing.</p> <p>Cost of boarding up could be £0 if Insurance Provider accepts alternative security measures.</p>

<p><b>3.6 Option 3b Kincorth Academy – Demolition as part of new housing project</b></p>	
<p><b>Description</b></p>	<p>Site with buildings in place transferred to HRA and demolition progressed.</p>
<p><b>Expected Costs</b></p>	<p><u>One off costs</u>  Board up building - £X  Install security fencing - £X  On site security - £0  Demolition - £0</p> <p><u>Ongoing Costs</u>  Ongoing staff management time – Not possible to estimate  Remedial works – Not possible to estimate  Business Rates - £128,000 for 12 months</p>
<p><b>Risks Specific to this Option</b></p>	<p>Theft, arson and vandalism remains a high risk.</p>
<p><b>Advantages &amp; Disadvantages</b></p>	<p><u>Advantages</u>  Delay in demolition costs.  Site made available for future development of new Torry Primary and Community hub.  Holding costs removed but at a later date.  No on site security costs.</p> <p><u>Disadvantages</u>  Extended period of holding costs.  Unightly building in middle of community for longer.</p>



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	<p>Delay in progressing site investigations.</p> <p>Cost of boarding up building.</p> <p>Extended period of managing vacant building.</p> <p>Cost of demolition may increase.</p>
<b>Other Points</b>	<p>Cost of demolition would be deducted from transfer/sale.</p> <p>It is more economical to purchase fencing rather than lease, so it is a one off cost rather than ongoing.</p> <p>Cost of boarding up could only be £0 if Insurance Provider accepts alternative security measures.</p>

**3.7 Scoring of Options Against Objectives**

Use the table below to score options against the objectives in order to create a shortlist of options to be considered.

Objectives	Options Scoring Against Objectives							
	1a	2a	3a	1b	2b	2c		
Clear sites for development	-1	3	3	-1	3	3	0	0
Minimise period that buildings are empty	-1	3	2	-1	3	2	0	0
Minimise revenue costs	0	3	1	0	3	1	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
<b>Total</b>	-2	9	6	-2	9	6	0	0
<b>Ranking</b>	3	1	2	3	1	2		

**Scoring**

Fully Delivers = 3

Mostly Delivers = 2

Delivers to a Limited Extent = 1

Does not Deliver = 0

Will have a negative impact on objective = -1

### 3.8 Recommendation

It is recommended that buildings are demolished at the earliest opportunity as per option 2a – Torry and option 2b – Kincorth. These options deliver on the objectives and although there is a significant capital cost of the demolitions, it is a spend to save.

Leaving the buildings in place has significant risks and would likely create negative press. Keeping the vacant periods to a minimum is the best way to deal with these risks.

In terms of funding Torry it is proposed that the £20m budget allocated to the new school and community hub be used. For Kincorth Academy it is proposed that the Condition & Suitability Programme be updated to incorporate this project.

## 4. Scope

All buildings at Kincorth Academy including the swimming pool, school buildings and artificial pitch are included in the proposed demolition.

All buildings at Torry Academy and the adjacent lodge are included in the proposed demolition.

### 4.1 Out of Scope

The lodge adjacent to Kincorth Academy is not considered part of the development site.

The Torry Academy playing fields and pavilion which are adjacent to Tullos Primary will remain in operational use.

Grounds maintenance costs will likely be very similar for all options. On that basis the cost of that ongoing maintenance is not covered in the options appraisal.

Photovoltaic panels on both Torry & Kincorth will have to be removed and stored for all options. On that basis it is considered out of scope.

**5. Benefits**

**5.1 Customer Benefits**

Benefit	Measures	Source	Baseline	Expected Benefit	Expected Date	Measure Frequency
Availability of sites for development	Torry site cleared.	Resources	0	1	Summer 2019	One off
	Kincorth site cleared.	Resources	0	1	Summer 2019	One off
Removal of potentially unsightly buildings	Torry site cleared.	Resources	1	0	Summer 2019	One off
	Kincorth site cleared.	Resources	1	0	Summer 2019	One off

**5.2 Staff Benefits**

Benefit	Measures	Source	Baseline	Expected Benefit	Expected Date	Measure Frequency
No ongoing management of two vacant buildings	Torry building handed to contractor.	Resources	0	1	Feb 2018	One off
	Kincorth building handed to contractor.	Resources	0	1	Feb 2018	One off


**5.3 Resources Benefits (financial)**

Benefit	Measures	Source	Capital or Revenue?	Baseline (£'000)	Saving (£'000)	Expected Date	Measure Frequency
No cost for boarding up	Cost of Torry Academy	Hard FM	Revenue	0	X	Aug 2018	One off
	Cost of Kincorth Academy	Hard FM	Revenue	0	X	Aug 2018	One off
Business rates savings	Business rates cease at Torry Academy	Resources	Revenue 2018/19	0	19	Mar 2019	One off
	Business rates cease at Torry Academy	Resources	Revenue 2019/20	0	118	Mar 2020	One off
	Business rates cease at Kincorth Academy	Resources	Revenue – 2018/19	0	24	Mar 2019	One off
	Business rates cease at Kincorth Academy	Resources	Revenue – 2019/20	0	147	Mar 2020	One off

**6. Costs**

## Business Case

### 6.1 Project Capital Expenditure & Income

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources</b>	n/a										
Add cost items under each heading											
<b>Land Acquisitions</b>	n/a										
<b>New Vehicles, Plant or Equipment</b>	n/a										
<b>Construction Costs</b>											
Torry Academy demolition costs	X										
Corporate fees	X										
Kincorth Academy demolition costs	X										
Corporate fees	X										
<b>Capital Receipts and Grants</b>	n/a										
<b>Sub-Total</b>	<b>X</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>X</b>

### 6.2 Project Revenue Expenditure & Income

## Business Case

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources</b>	n/a										
Add cost items under each heading											
<b>Non Staffing Resources</b>											
Torry Academy on site security	X										
Security fencing	X										
Business rates	16										
Kincorth Academy on site security	X										
Security fencing	X										
Business rates	20										
<b>Revenue Receipts and Grants</b>											
<b>Sub-Total</b>	<b>X</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>X</b>

### 6.3 Post- Project Capital Expenditure & Income

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources</b>	n/a										
Add cost items under each heading											
<b>Land Acquisitions</b>	n/a										

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<b>New Vehicles, Plant or Equipment</b>	n/a										
<b>Construction Costs</b>	n/a										
<b>Capital Receipts and Grants</b>	n/a										
<b>Sub-Total</b>											

**6.4 Post- Project Revenue Expenditure & Income**

(£'000)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Staffing Resources</b>	n/a										
Add cost items under each heading											
<b>Non Staffing Resources</b>	n/a										
<b>Revenue Receipts and Grants</b>	n/a										
<b>Sub-Total</b>											



## 7. Procurement Approach

The contracts will be managed by the Council's design team. Tenders will be invited in line with the procurement regulations.

## 8. Key Risks

Description	Mitigation
Insurance provider insists on boarding up of building within 4 weeks of closure as per guidance.	Discuss with Insurance Team and Insurance Provider in advance of building closures.
As soon as the buildings are vacant the risks of theft, arson, vandalism, etc increase significantly.	Carry out demolition as soon as possible, following implementation of appropriate security.

## 9. Time

### 9.1 Time Constraints & Aspirations


Both Torry and Kincorth will be empty by the end of July 2018.

There is a lead in time for demolitions which covers asbestos surveys and development of tender.

There is a business rates reduction for vacant buildings of 50% for first 3 months and 10% thereafter. Therefore it would be financially beneficial if demolition started before the 3 month period ends.

### 9.2 Key Milestones

Description	Target Date
Asset Programme Board Approval	May 2018
Capital Programme Board Approval	May 2018
Capital Programme Committee	May 2018
Strategic Commissioning Committee	Jun 2018
Asbestos surveys	Oct 2018
Services disconnection/removal	Oct 2018
Tender development and issue	Oct 2018


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Tender return.	Nov 2018
Tender assessment and appointment of contractor.	Dec 2018
Start on site.	Feb 2018
Work completed.	Jun 2019

<b>10. Governance</b>	
The Corporate Landlord will manage the demolitions, working alongside Capital to deliver the project.	
Role	Name
<b>Project Sponsor</b>	Stephen Booth
<b>Project Manager</b>	David Marshall
<b>Other Project Roles</b>	

<b>11. Resources</b>			
Task	Responsible Service/Team	Start Date	End Date
Clear building including furniture reuse, recycle, sale, etc.	Soft FM	Jun 2018	Jul 2018
Tender development and issue	Design Team	May 2018	Oct 2018
Tender assessment, contractor appointment and mobilisation	Design Team	Nov 2018	Jan 2018
Contract administration	Design Team	Feb 2019	Jun 2019
Securing building	Hard FM	Aug 2018	Feb 2018

<b>12. Environmental Management</b>		
<p>Contractors will be required to carry out demolition works in line with relevant regulations. This will include appropriate dust suppression, water contamination control, waste disposal and asbestos control. Appropriate tendering and contract management will be in place to manage these requirements. When scoping the works consideration will be given to hours of working, maintaining access to existing open space/sports areas, nesting birds and vehicular movements.</p> <p>A process is in place for reusing, redistributing, recycling items and sale of any equipment, furniture, etc that is not required for Lochside Academy.</p> <p>Recycling of materials will be possible in some instances but due to the nature of the project some waste will be transported to landfill.</p>		
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<b>13. Stakeholders</b>
<p>Local community, local members, HRA, Capital Programme Committee, Strategic Commissioning Committee and Resources Function.</p>

<b>14. Assumptions</b>
<p>Boarding up of the buildings will not be required if alternative arrangements and/or contracts for demolition are in place, which will then satisfy the insurer's requirements. That contractor would be on site at the start of February. Therefore both schools would be vacant for a period of 6 months.</p> <p>That if options 3a and 3b were progressed that the buildings would be vacant for a minimum of 1 year.</p>

<b>15. Dependencies</b>
<p>Demolition contractors will be available to progress the work within the required timescales. Approvals are in place for relevant Boards and Committees.</p> <p>Demolition projects is identified as a priority for the Design Team.</p>

<b>16. Constraints</b>
<p>None identified.</p>

<b>17. ICT Hardware, Software or Network infrastructure</b>		
<b>Description of change to Hardware, Software or Network Infrastructure</b>	<b>EA Approval Required?</b>	<b>Date Approval Received</b>
n/a		

<b>18. Support Services Consulted</b>				
<b>Service</b>	<b>Name</b>	<b>Sections Checked / Contributed</b>	<b>Their Comments</b>	<b>Date</b>

PMO	Roddy McTaggart	Options appraisal	Comments provided on content – Changes made as required.	1/5/18
Finance	Scott Paterson		No issues with the Torry recommendation – work needs to be done, and there is a budget in place as part of the already defined use for the site which should be accessed in the first instance.  In terms of Kincorth the condition & suitability budget can only be used if the demolition is expected to increase the value of the site prior to disposal, and those costs are offset or exceeded by the increase in value.	8/5/18
Estates	Neil Strachan		Minimal boarding up may still be required even if recommendation is implemented.	8/5/18
Energy Management	Mai Muhammad		Utilities standing charges would be relevant to the 'Do Nothing' options. Photovoltaic panels will require to be stored.	3/5/18
Hard FM	Ian Cowling		Supportive of recommendation.	9/5/18
Legal (Conveyancing)	Craig Veitch		No legal comments at this stage of the Business Case.	1/5/18
Legal (Procurement)	Alison Watson		Comments anticipated on procurement business case.	
Procurement	Alison Gallacher		Looks like a rational approach. A procurement business case will require to be approved.	4/5/18
Architecture and Design Team	Neil Esslemont		The timescales identified in the business case are tight but achievable, they are however dependent on the building being cleared at the earliest opportunity and the asbestos survey report being completed in good time so that the implications can be incorporated into the tender	

**Business Case**

			package due to issued mid August.	
Grounds Maintenance	Steven Shaw		No comment from Service perspective but supportive of proposed work.	1/5/18
Environmental Policy	Amy Gray	All sections checked.	Comments provided on content – Changes made as required.	3/5/8
Planning	Gail Beattie			
Housing Programme	Paul Genoe		A delay in demolition would create a serious delay in pre-start development works as no Site Investigations (SI) can start at Kincorth until the buildings are demolished and nothing can be determined in relation to design works till the SI is complete and reported on.	

**19. Document Revision History**

Version	Reason	By	Date
1	Draft for consultation	A. Reid	30/4/18
2	Update following initial consultation comments	A. Reid	10/5/18

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## PROCUREMENT BUSINESS CASE

(For proposed procurements where the total estimated expenditure exceeds  
£50,000 (supplies/services) or £250,000 (works))

### Appendix B



**ABERDEEN**  
CITY COUNCIL

<b>Procurement / Contract Title</b>	Demolition of Torry Academy and Kincorth Academy		
<b>Contract Ref. No.</b>	n/a		
<b>Function</b>	Resources	<b>Cluster</b>	Corporate Landlord
<b>Lead Officer</b>	Alastair Reid	<b>Date prepared:</b>	10-05-18

#### 1. Brief Description and Rationale

Please briefly outline your business requirement(s). Include information on:

Type of requirement – description of need. Goods/Services/Works – or combination of these.	Demolition
Whether there is a current structure/contract delivering some or all of the requirements.	None
Information on those contracts - start date, end date, value, scope.	<p>Earliest dates:- Start on site – Feb 2019 Work completed – Jun 2019</p> <p>Torry Academy estimated cost - £X incl corporate fees Scope - All buildings at Torry Academy and the adjacent lodge are included in the proposed demolition.</p> <p>Kincorth Academy estimated cost - £X incl corporate fees Scope - All buildings at Kincorth Academy including the swimming pool, school buildings and artificial pitch are included in the proposed demolition.</p>
Key stakeholders – Services, consumers, communities, suppliers etc.	Local community, local members, HRA, Capital Programme Committee, Strategic Commissioning Committee and Resources Function.
Options considered for procurement and option proposed – tender, framework, reserved contract, collaborative opportunity, etc.	Options considered were tender and framework. The option proposed is a tender exercise issued via the Public Contracts Scotland website complete with project specific quality assessment.
Legal/statutory obligations (please define legislation).	CDM Regulations 2015, Building Warrant and Planning Permission will need to be fully considered. Both in procurement and implementation.

#### 2. Business Impact

Please indicate below how you anticipate that the requirements, if met, would contribute to a positive business impact and which outcomes are intended to be delivered (please outline any known financial savings, customer service benefits, benefits to the service, impact on Council plan or priority etc.)

Customer

Availability of sites for development  
Removal of potentially unsightly buildings

Staff

No ongoing management of two vacant buildings

Resources

No cost for boarding up - £X (subject to discussions with insurance provider)  
Business rates savings - £101,000 (year one)

**3. Assessment of Business Impact**

Please define clearly how you propose to measure and benchmark the benefits set out in item 2 to justify the investment. These will be used later by you to track, monitor and measure the delivery of the benefits and assess the overall success of the project in achieving its objectives.

Customer

Benefits achieved when demolitions are completed.

Staff

Benefits achieved when demolitions are completed.

Resources

Measured by monitoring actual revenue spend.

**4. Financial Implications Summary – Estimated overall value of this requirement**

Insert details below of one off purchase price or total costs for period of supply

Estimated Costs	£X including corporate fees
-----------------	-----------------------------

**5. Procurement & Implementation**

**Please state the estimated start date for the procurement exercise including a procurement timeline and details of the proposed contract/contract extension implementation.**

Procurement Start Date	Oct 2018
Contract Start Date	Feb 2018

Proposed Procurement Timeline including dates:

Tender development and issue – Oct 2018

Tender return – Nov 2018

Tender assessment and appointment of contractor – Dec 2018

Start on site – Feb 2018

Implementation of the new contract:

The Corporate Landlord will project manage the demolitions, working alongside Capital to deliver the project.

**6. Sustainable Procurement & Community Benefits**

Consider the table below. If applicable, indicate between 1 and 2 themes that you consider are relevant to the proposed Contract. Please note that where selected these themes **must** be referenced within procurement documents.



Improve (Wellbeing)	Promote	Facilitate (Involve)
Social <input type="checkbox"/>	Innovation <input type="checkbox"/>	SMEs <input type="checkbox"/>
Economic <input type="checkbox"/>	Equalities/reduce Inequality <input type="checkbox"/>	3 <sup>rd</sup> Sector organisations <input type="checkbox"/>
Environmental <input type="checkbox"/>	Ethical trading and social justice <input type="checkbox"/>	Supported Businesses <input type="checkbox"/>
Health <input type="checkbox"/>	Fair Work Practices/The Living Wage <input type="checkbox"/>	Prompt Payment throughout the supply chain <input type="checkbox"/>
Food poverty/fuel poverty/energy efficiency <input type="checkbox"/>	Resource efficiency and the circular economy <input type="checkbox"/>	Community engagement and community empowerment; community projects <input type="checkbox"/>
Air quality/reduction of harmful emissions/reduction of waste and packaging <input checked="" type="checkbox"/>	Education; employability and skills training <input type="checkbox"/>	Collaboration and collaborative working <input type="checkbox"/>

Justification for above:

Demolition contracts create opportunities for recycling/reuse of materials.

### 7. Contract Management

What contract management procedures shall be put in place to manage the proposed contract? Use the Contract and Supplier Management Assessment Tool (available within the Procurement Manual) to determine whether the level of management required for a specific contract and supplier should be High/Medium/Low.

#### Contract/Supplier Management Requirement

- High  
 Medium  
 Low

### 8. Governance

Please confirm the name of the Director/Chief Officer who is Project Sponsor for this project.

Corporate Landlord – Stephen Booth

What budget has been allocated for this project? Please give budget code(s).

Torry Academy – Capital budget for new Torry Primary and Community hub.  
Kincorth Academy – Condition & Suitability Programme

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