

Investment Decision, St Ives Park and Ride Smart Energy Grid

To: Environment & Green Investment

Meeting Date: 1st July 2021

From: Steve Cox, Executive Director, Place and Economy

Electoral division(s): St Ives South and Needingworth

Key decision: Yes

Forward Plan ref: 2021/046

Outcome: A Smart Energy Micro-grid comprising solar PV, battery storage, EV charging infrastructure and local supply of clean electricity to customers saving 249 tonnes of carbon emissions (CO₂e) in year one and totalling 7,691 CO₂e tonnes of savings over the 30-year life of the project. In addition, local air quality improvements are forecast as a result of reducing diesel consumption.

Recommendation: The Committee is asked to:

- a) note the background and progress with the project
- b) approve the investment case for the St Ives Park and Ride Smart Energy Grid project as set out in section 2.3 of the report; and
- c) approve entering into a Funding Agreement with the European Regional Development Fund Managing Agent, Ministry for Housing, Communities and Local Government (MHCLG) for up to £2,006,873 grant for the St. Ives Smart Energy Grid Project
- d) delegate the following decisions to the Executive Director of Place and Economy and Director of Resources, in consultation with the Chair and Vice-Chair of Environment & Green Investment Committee and in accordance with the approved investment case for the Project:
 - i) to sign the Power Purchase Agreements with Customers; and
 - ii) issue a Notice to Proceed (NTP) to Bouygues based on best available final costs

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1 Background

- 1.1 The St Ives Smart Energy Grid Project is to be located at the St Ives Park and Ride (SIPR) ([see Appendix A](#)). It comprises solar panels installed on canopies over the car parking spaces, battery storage, EV charging infrastructure and private wires to customers. The electricity generated on-site will serve all the electricity demand for the site and all excess electricity will be sold through private wires to commercial customers close to the site. In addition, the learning and development of the project will be shared with local businesses as part of a business support programme, to help build knowledge, skills and capacity in the low carbon services sector.
- 1.2 This project was originally conceived to address market failure by finding a new business model for small and medium-sized renewable energy projects. Market failure has resulted from government policy encouraging greater levels of decentralised renewable energy but a distribution network not ready for the levels of renewable energy coming forward. The result is that small and medium-sized renewable energy projects find it too costly to connect to the distribution network, especially where network upgrades are required, as upgrade costs fall on the project. For Cambridgeshire, this market failure was more acute than many other areas, as capacity on the network was already limited as a result of the pace and scale of Cambridgeshire's growth agenda.
- 1.3 The challenge for Cambridgeshire, was the choice of do-nothing to promote and deliver small and medium scale renewable projects or find new ways of working, new business models and collaborations with government to share understanding of the challenges on the distribution network. The market failure is now better understood but problems still remain for projects.
- 1.4 This project has a five-year history. The Council submitted an outline application for European Regional Development Funds (ERDF) to MHCLG in August 2016. Assets and Investment Committee approved the initial outline business case in September 2016 and the Council was subsequently invited by MHCLG to complete a full ERDF application, which was submitted in March 2017.
- 1.6 There has been considerable delay securing the ERDF grant. This is mainly due to a process securing the land title for the park and ride site, a legacy issue from the implementation of the Guided Bus Project. Securing the land title in early 2021 has now allowed detailed negotiations on the final application to complete.
- 1.7 The Project received planning approval on 6th July 2018 and Commercial and Investment Committee approved the commencement of minor works in May 2020 to implement the carport foundations on-site before the expiration of the planning permission i.e. before 6 July 2020. To undertake these works the Council entered into a works contract with Bouygues Energies and Services Ltd. Further works will only commence if Council approves the investment case, signs a contract with MHCLG for ERDF grant and final costs are agreed to allow a Notice to Proceed to be issued for works to start.
- 1.8 A lot has changed in the five years since the original business case and subsequent updates approved by committee. The overall project cost has increased, reflecting impacts from Brexit and the global Covid-19 pandemic.

- 1.9 The Project outcomes are the reduction of 7,691 tonnes of carbon emissions over the 30-year life of the Project; the construction of a renewable energy and storage project that supports the electrification of transport and supplies clean energy to local businesses. As a potential ERDF demonstrator project, the Project must also work with at least 40 businesses in the Low Carbon Environmental Goods and Services Sector (LCEGS) to share learning and knowledge on the integration of a range of different low-carbon technologies and what this means for supply chain capacity and leadership.

2 Key issues

2.1 European Regional Development Fund (ERDF) Grant Application:

The European Regional Development Fund Managing Authority, MHCLG, have completed their technical appraisal of the Project's Full Application and has approved in principle ERDF award to the Project subject to agreement of the contract and conditions. The ERDF award is for up to 50% of eligible costs, or a maximum grant of £2,006,837 based on a total project cost of £4,013,675. The standard grant conditions and the particular conditions for the project have been shared with the Council. The Project conditions cover issues such as:

- sharing the Final Investment Grade Proposal;
- securing non-material planning amendments and minor planning application for trenching works;
- confirmation of Power Purchase Agreements in place with customers and updated staffing costs.

For most of the conditions, delivery within 3 months of the Funding Agreement is expected and before a first grant claim can be paid.

- 2.2 The Funding Agreement is expected in June 2021 and must be signed within 14 days of its issue. The Project must then seek to deliver the construction of the project by December 2022 with all other eligible Project activities by June 2023. A final grant claim must be submitted by September 2023. The timescales are very tight for delivery considering supply chain risks now emerging from Brexit and Covid-19.

2.3 Investment Case:

There have been significant changes to the business case since it was agreed by Assets and Investment Committee in September 2016 and Commercial and Investment Committee in September 2019. Major influences include a rise in interest rates, higher costs of steel and solar panels, increased costs overall resulting from demand for raw materials and longer construction timescales as a result of Covid-19.

The summary results of the business case are shown in Table 1 below. The confidential annexe to this report explains how these results could be affected by key commercial risks and sensitivities.

Table 1 - Base business case summary, July 2021

	Excluding Carbon	Including Carbon
Total capital cost of the project	£4,283,123	£4,283,123
Net operating revenue over 30 years	£4,503,190	£5,895,263
Net cash flow after loan costs	£1,647,534	£3,039,607
30yr Internal Rate of Return (IRR)	2.84%	4.62%
Payback Period (years)	21.93	18.27
Net Present Value (NPV) over 30 years	-£58,199	£755,304
Tonnes Avoided Over 30 years (CO ₂)	7,691	7,691
Average Annual Carbon Saving (CO ₂)	256.38	256.38
Generated over 30 years	28GWh	28GWh
Number of households equivalent	~297	~297

2.4 The Council could decide to delay investment or not to invest in the Project. If a delay is proposed, the opportunity to fund part of the Project through the ERDF grant will be missed. It is likely that the Power Purchase Agreement customers would need to find other solutions to their long term energy requirements outside of the Project. The risk of continued price increases to the cost of solar modules and other equipment will remain.

3 Project Delivery Risks and Opportunities

3.1 Project programme:

The proposed project programme has tight deadlines to accommodate timelines imposed by the ERDF grant programme. A high-level programme of the project is provided in [Appendix C](#). Any delays have the potential to reduce the costs that can be claimed as eligible under the ERDF requirements.

To mitigate programme risk, additional resources have been secured to oversee the delivery of the construction, wider ERDF activities and reporting. However, the risk associated with the supply of goods and services remains and work continues with our partner to manage these risks.

3.2 Notice to Proceed:

The construction contract between Bouygues and the County Council is already in place as a result of the work carried out on the site in 2020. Further work under the contract is subject to the Council issuing a 'Notice to Proceed' (NTP). This recognised a gap between signing the

contract and commencing the bulk of work on-site would result, while the full application for grant funding was being assessed.

To issue the Notice to Proceed, latest costs from suppliers are needed on key elements of the Project. The target is for costs to be agreed by the end of July to allow the Council to issue a Notice to Proceed to Bouygues and for contracts to be placed on key goods and construction mobilisation to start. However, the supply chain impacts from Covid-19 are so acute right now, that costs on major items such as steel and solar PVs are held for only one week or less. Previously these were held for 90 days. This means the Project must be agile in its decision making to allow the best prices on goods to be secured, allow contracts to be placed and manage long lead in times on key items to be supplied for construction to be completed by December 2022.

3.3 Power Purchase Agreements (PPAs):

The business case for the project is predicated on selling clean electricity to local businesses. There are two potential PPA customers and both have signed Memorandum of Understanding and Letters of Intent to negotiate for electricity supply from the Project. These negotiations could not be concluded prior to ERDF grant approval but have now restarted and the intention is to conclude these prior to the issue of the Notice to Proceed. It is also a condition on Funding that PPA agreements are agreed swiftly and put in place before grant is paid.

3.4 Future commercialisation of the site:

The ERDF Project is a first phase for the park and ride site. Once operational, there is an opportunity to explore how to further commercialise the site, for example, promoting it as a 'low carbon transport hub' to deliver the ambitions of the Local Transport Plan and EV strategy. This could include, by way of example, building an EV forecourt to encourage light freight, taxis, buses, electric cargo bikes and scooters to charge vehicles and provide on-site services to support businesses.

3.5 Proposed Delegation Arrangements:

The Funding Agreement, Power Purchase Agreements and the Notice to Proceed have time constraints. It is proposed that if Committee approves the investment case, delegations to enter into the Funding Agreement, Power Purchase Agreements with customers and to issue the Notice To Proceed, sit with the Executive Director of Place and Economy and Director of Resources in consultation with the Chair and Vice-Chair of Environment & Green Investment.

4 Alignment with corporate priorities

4.1 Communities at the heart of everything we do

Supporting our communities to adapt to living and working in a low carbon future is essential. This Project will share learning and knowledge on the project with businesses and the community.

4.2 A good quality of life for everyone

There are no significant implications for this priority.

4.3 Helping our children learn, develop and live life to the full

There are no significant implications for this priority.

4.4 Cambridgeshire: a well-connected, safe, clean, green environment

It is estimated that the project would prevent the emission of more than 7,691 tonnes of CO₂ over its lifetime through offsetting fossil-fuel electricity generation.

4.5 Protecting and caring for those who need us

There are no significant implications for this priority.

5 Significant Implications

5.1 Resource Implications

The ERDF award is for up to 50% of all eligible costs, or a maximum grant of £2,006,837 based on a total project cost of £4,013,675. The Council will fund the remaining costs of the project through a PWLB loan. Staff costs will be partially reimbursed from the grant but the overhead cost for staff is capped at 15%. Costs for developing the grant application are not eligible for reimbursement under the grant and sunk costs are currently picked up by an approved Transformation Fund bid.

5.2 Procurement/Contractual/Council Contract Procedure Rules Implications

Bouygues Energies & Services were procured under a mini-competition run under the Refit 2 Framework. A works contract was agreed in 2020 to deliver minor works at the park and ride including conditions precedent before major works can start. One of these conditions was entering into a Funding Agreement and agreeing on final costs.

5.3 Statutory, Legal and Risk Implications

Please see [Appendix B](#). Note that these reflect overall risks to the project, not solely to this stage of works. There is risk associated with the ERDF grant as the timetable for delivery is very tight and Covid-19 impacts are impacting costs and delivery timelines for raw materials and supplies. If the project construction is delayed and falls outside the ERDF programme, this becomes the Council's cost.

5.4 Equality and Diversity Implications

There are no significant implications within this category. An Equality Impact Screening undertaken for the proposals has shown no potential negative impact.

5.5 Engagement and Communications Implications

Local Members, the St Ives Town Council, commuters, the Park and Ride team and St Ives in Bloom (a voluntary gardening group that plant at the park and ride) have been notified as to the status of the project. Communication with the public and local Members will increase once a Funding Agreement is signed.

5.6 Localism and Local Member Involvement

As above

5.7 Public Health Implications

The positive implications of this renewable energy project will be air quality improvements from the reduction of diesel-generated electricity being used and clean electricity produced by the solar PVs.

5.8 Environment and Climate Change Implications on Priority Areas:

5.8.1 Implication 1: Energy efficient, low carbon buildings.

Positive Status

Explanation: The project is replacing most of the grid-supplied energy powering the site with clean energy and helping to decarbonise the PPA customers by replacing fossil-fuel generators and providing local green electricity.

5.8.2 Implication 2: Low carbon transport.

Positive Status

Explanation: As part of the project, electric vehicle charge points will be installed and powered by local clean electricity generated on-site, supporting low carbon transport.

5.8.3 Implication 3: Green spaces, peatland, afforestation, habitats and land management.

Positive Status

Explanation: As a condition of receiving planning permission, the project will demonstrate biodiversity net gain. Landscaping and planting – both ornamental and for wildlife encouragement - are included in the plans.

5.8.4 Implication 4: Waste Management and Tackling Plastic Pollution.

Neutral Status

Explanation: The carports have been designed to ensure no impact on the closed landfill capping and a remediation strategy is in place should piercing of the capping materials occur. Packaging waste associated with the delivery of materials will be managed by supply chain procurement conditions which Bouygues are required to apply via our contract with them. A waste management plan is developed to manage the impact of waste.

5.8.5 Implication 5: Water use, availability and management:

Neutral Status

Explanation: No impact on water use, availability or management.

5.8.6 Implication 6: Air Pollution.

Positive Status

Explanation: The project will be generating clean energy which offsets grid-supplied electricity of which the majority is produced by burning fossil fuels. A component of the project will be to install additional electric vehicle chargers which will offset petrol/diesel-fuelled miles.

5.8.7 Implication 7: Resilience of our services and infrastructure, and supporting vulnerable people to cope with climate change.

Positive Status

Explanation: Locally generated electricity and infrastructure builds resilience in the local energy system enabling greater ability to cope with extreme events both locally and nationally

Officer Clearance

Have the resource implications been cleared by Finance?

Yes

Name of Financial Officer: Sarah Heywood

Have the procurement/contractual/ Council Contract Procedure Rules implications been cleared by the LGSS Head of Procurement?

Yes

Name of Officer: Henry Swan

Has the impact on statutory, legal and risk implications been cleared by the Council's Monitoring Officer or LGSS Law?

Yes

Name of Legal Officer: Fiona McMillan

Have the equality and diversity implications been cleared by your Service Contact?

Yes

Name of Officer: Elsa Evans

Have any engagement and communication implications been cleared by Communications?

Yes

Name of Officer: Simon Cobby

Have any localism and Local Member involvement issues been cleared by your Service Contact?

Yes

Name of Officer: Emma Fitch

Have any Public Health implications been cleared by Public Health?

Yes or No

Name of Officer: Iain Green

If a Key decision, have any Environment and Climate Change implications been cleared by the Climate Change Officer?

Yes

Name of Officer: Emily Bolton

6 Source documents guidance

1. Smart Energy Grid Demonstrator Project, St Ives Park and Ride – Outline Business Case, paper to 16 September 2016 Assets and Investment Committee

Location: <https://tinyurl.com/yxaytd88>

2. Smart Energy Grid – Update on European Regional Development Funding and Risks, paper to 15 September 2017 Commercial and Investment Committee

Location: <https://tinyurl.com/y3d25zqw>

3. Smart Energy Grid – Business Case and European Regional Development Fund Update, paper to 15 December 2017 Commercial and Investment Committee

Location: <https://tinyurl.com/yyc46odl>

4. Progress and Risk Update for St Ives Smart Energy Grid project Member briefing note, June 2018

Location: Available upon request

5. Progress and Risk Update for the St Ives Smart Energy Grid project, 13 December 2018

Location: Available upon request

6. Notice to Proceed for St Ives Smart Energy Grid, paper to 13 September 2019 Commercial and Investment Committee

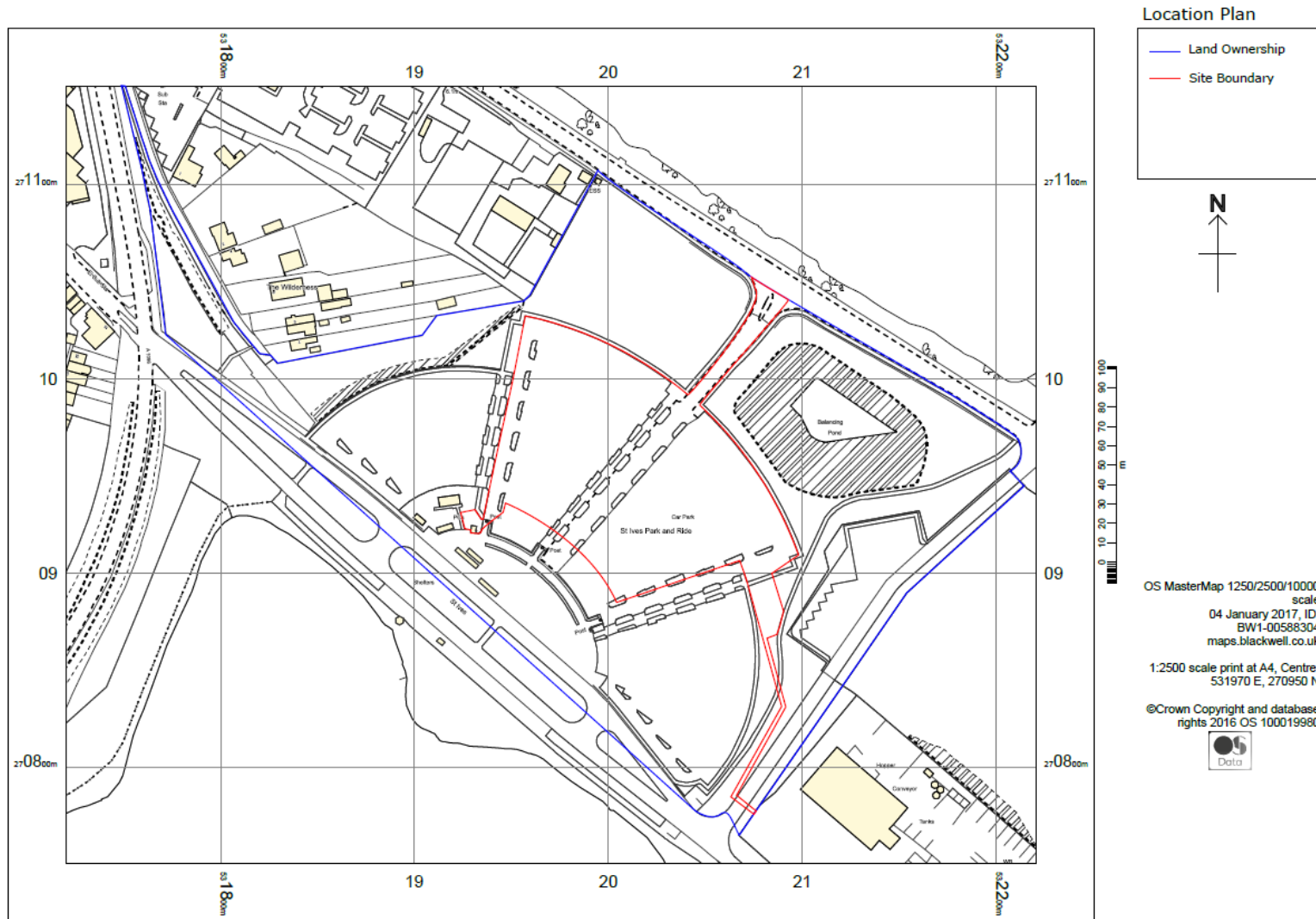
Location: <https://tinyurl.com/yyjy5o5e>

7. Minors works for St Ives Smart Energy Grid, paper to 22 May 2020 Commercial and Investment Committee

Location: <https://tinyurl.com/5xbukc9k>

Appendix A – Site location

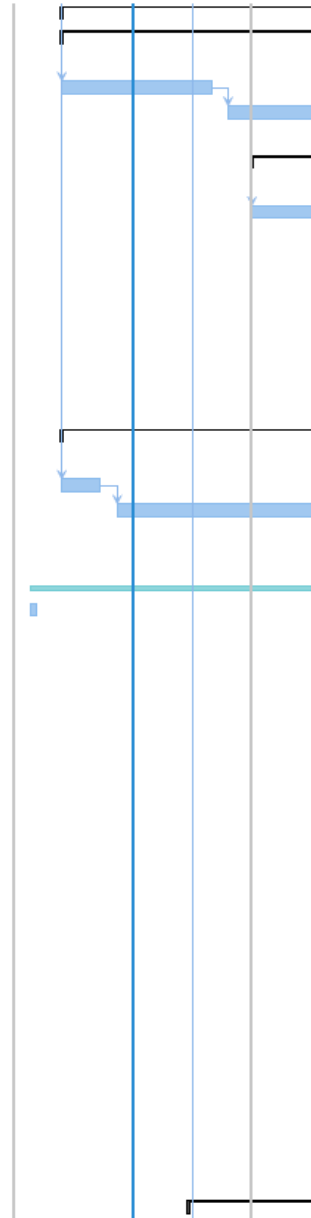
A map showing the proposed area for the development of a smart energy grid on the County-owned St Ives park and ride.



Appendix B – Project Risk Register

Appendix B is provided separately in the excel spreadsheet '2021 07 01 Appendix B_SIPR Risk Register.xls'

38	▸ Procurement of external services	68d	07/06/2021	09/09/2021
39	▸ Business Support Programme contractor	37d	07/06/2021	27/07/2021
43	Award contract	1d	27/07/2021	27/07/2021
40	Develop specification	15d	07/06/2021	25/06/2021
41	Release RFQ	14d	28/06/2021	15/07/2021
42	Tenders due	0d	15/07/2021	15/07/2021
56	▸ Procure legal advisor	38d	01/07/2021	23/08/2021
60	Award contract	1d	23/08/2021	23/08/2021
57	If external legal advice still required, develop specification for legal advisor	10d	01/07/2021	14/07/2021
58	Release RFQ for legal advisor	20d	15/07/2021	11/08/2021
59	Tenders due for legal advisor	0d	11/08/2021	11/08/2021
50	▸ Procure Quantity Surveyor	38d	19/07/2021	09/09/2021
55	Award contract	0d	09/09/2021	09/09/2021
51	Determine whether an internal Framework or resource exists	1d	19/07/2021	19/07/2021
52	If not, develop specification for Quantity Surveyor	10d	20/07/2021	02/08/2021
53	Release RFQ for Quantity Surveyor	20d	03/08/2021	31/08/2021
54	Tenders due for Quantity Surveyor	0d	31/08/2021	31/08/2021
44	▸ Summative Assessment evaluator	53d	07/06/2021	18/08/2021
49	Award contract	1d	18/08/2021	18/08/2021
45	Determine whether an internal Framework or resource exists	5d	07/06/2021	11/06/2021
46	If no internal resource, develop specification for evaluator for Summative Assessment	20d	14/06/2021	09/07/2021
47	Release RFQ for Summative Assessment evaluator	20d	12/07/2021	06/08/2021
48	Tenders due	0d	06/08/2021	06/08/2021
79	▸ Project Governance			
80	Project Team meetings - biweekly	1d	03/06/2021	03/06/2021
81	▸ SPAB meetings - progress and risk update - biannually (start of quarter dates provided, Q1 = Ap	381d	01/10/2021	03/04/2023
83	Q1 2022	0d	01/04/2022	01/04/2022
85	Q1 2023	0d	03/04/2023	03/04/2023
82	Q3 2021	0d	01/10/2021	01/10/2021
84	Q3 2022	0d	03/10/2022	03/10/2022
61	▸ Submit Quarterly claims and Progress Reports	504d	01/10/2021	28/09/2023
62	Claim 1: First Claim and Progress Report (covering start to Funding Agreement)	20d	01/10/2021	28/10/2021
64	Claim 2: Q3 2021 Claim and Progress Report	20d	05/01/2022	01/02/2022
66	Claim 3: Q4 2021 Claim and Progress Report	20d	01/04/2022	03/05/2022
68	Claim 4: Q1 2022 Claim and Progress Report	18d	01/07/2022	26/07/2022
70	Claim 5: Q2 2022 Claim and Progress Report	20d	03/10/2022	28/10/2022
72	Claim 6: Q3 2022 Claim and Progress Report	20d	05/01/2023	01/02/2023
74	Claim 7: Q1 2023 Claim and Progress Report	20d	03/04/2023	03/05/2023
76	Claim 8: Q2 2023 Claim and Progress Report	18d	04/07/2023	27/07/2023
78	Claim 9: FINAL GRANT CLAIM (captures all defrayed expenses since Activity End date)	45d	27/07/2023	28/09/2023
67	Provide a forecast of spending in Q1 2022	7d	01/04/2022	11/04/2022
69	Provide a forecast of spending in Q2 2022	7d	01/07/2022	11/07/2022
63	Provide a forecast of spending in Q3 2021	7d	01/10/2021	11/10/2021
71	Provide a forecast of spending in Q3 2022	7d	03/10/2022	11/10/2022
65	Provide a forecast of spending in Q4 2021	7d	05/01/2022	13/01/2022
75	Provide forecast of spending in Q1 2023	7d	03/04/2023	13/04/2023
73	Provide forecast of spending in Q4 2022	7d	05/01/2023	13/01/2023
77	SUMMATIVE ASSESSMENT	0d	27/07/2023	27/07/2023
86	▸ WP2 - Capital Build and selling energy	375d	23/06/2021	12/12/2022



87	↕	▸ Planning	375d	23/06/2021	12/12/2022
99	↕	▸ Capital build - contract management	360d	14/07/2021	12/12/2022
103	↕	Health and Safety Monitoring	360d	14/07/2021	12/12/2022
101	↕	Monitor timelines	360d	14/07/2021	12/12/2022
100	↕	Review Project Execution plans	360d	14/07/2021	12/12/2022
102	↕	Review Risk Assessment and Method Statements	360d	14/07/2021	12/12/2022
88	↕	▸ Non-material amendment (NMA) application	21d	23/06/2021	21/07/2021
89	↕	Develop inputs	10d	23/06/2021	06/07/2021
91	↕	Planners approve NMA	10d	08/07/2021	21/07/2021
90	↕	Submit Non-material amendment application	1d	07/07/2021	07/07/2021
92	↕	▸ Planning application on new trenching (minor application)	101d	23/06/2021	11/11/2021
96	↕	Assessment period (planners)	40d	04/08/2021	29/09/2021
97	↕	Planning permission granted	1d	30/09/2021	30/09/2021
98	↕	Preconstruction condition discharge, if needed	30d	01/10/2021	11/11/2021
93	↕	Prepare inputs from validation checklist	15d	23/06/2021	13/07/2021
94	↕	Submit application	0d	13/07/2021	13/07/2021
95	↕	Validation exercise	5d	21/07/2021	27/07/2021
104	↕	▸ WP3 - Business Support Programme	477d	28/07/2021	16/06/2023
107	↕	1:1 induction sessions for businesses to establish ERDF and State Aid eligibility	420d	20/08/2021	19/04/2023
108	↕	Collect evidence for impact on individual businesses	460d	20/08/2021	16/06/2023
106	↕	Design business recruitment questionnaire	10d	06/08/2021	19/08/2021
105	↕	Develop Action Plan for BSP	7d	28/07/2021	05/08/2021
113	↕	▸ Knowledge Transfer Workshops (3 hours) indicative dates only	270d	19/08/2021	14/09/2022
114	↕	First Workshop and site visit	0d	19/08/2021	19/08/2021
117	↕	Fourth workshop and site visit	0d	14/09/2022	14/09/2022
115	↕	Second workshop and site visit	0d	24/12/2021	24/12/2021
116	↕	Third workshop and site visit	0d	09/05/2022	09/05/2022
118	↕	▸ Management and leadership development workshops - indicative dates only	240d	15/10/2021	28/09/2022
119	↕	First workshop (3 hours)	0d	15/10/2021	15/10/2021
121	↕	Framework benefit workshop (2 hours)	0d	28/09/2022	28/09/2022
120	↕	Second workshop (3 hours)	0d	06/04/2022	06/04/2022
109	↕	▸ Policy Workshops (indicative dates only)	150d	17/09/2021	22/04/2022
110	↕	First policy workshop (3 hours)	0d	17/09/2021	17/09/2021
111	↕	Second policy workshop (3 hours)	0d	10/12/2021	10/12/2021
112	↕	Site visit to St Ives	0d	22/04/2022	22/04/2022

